REDACTED IN ITS ENTIRETY

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

INTELLECTUAL VENTURES I LLC and INTELLECTUAL VENTURES II LLC,

Plaintiffs,

V.

C.A. No. 11-cv-00908 (SLR)

MOTOROLA MOBILITY LLC,

Defendant.

DECLARATION OF DR. MARTIN RINARD

- 1. My name is Martin Rinard, Ph.D., and I have provided opinions in this matter as an expert in the area of distributed systems that, in the case of U.S. Patent No. 7,810,144 ("the '144 patent") can be used to transfer files. I have previously provided an opinion in this case on May 17, 2013, and have given deposition testimony on June 21, 2013.
- I am over the age of majority and competent to give the statements contained in this
 Declaration, and if called upon to testify, would do so consistently with what is recorded in this
 Declaration.
- 3. It is my opinion that the claim term "generating, at the first device, a unique transaction identifier that identifies a transfer of the single combined file" is ambiguous. It is my understanding that because the term is ambiguous and cannot be construed, the term may be indefinite under the applicable patent laws. I provide no legal opinion in this declaration.

 Instead, I explain how the written specification of the '144 patent and the knowledge of a person

of ordinary skill in the art does not resolve the ambiguity created by the '144 patent disclosure as it pertains to this claim phrase.

- What follows is consistent with the opinions I provided in my May 17, 2013 Report and June 21, 2013 testimony.
- 5. The written specification of the '144 patent does not disclose a transaction identifier, unique or not, generated at any device. In the '144 patent, a file transfer is a transaction ("According to another embodiment, a transaction count increases after each successful file transfer, and no further transfers are permitted when a predetermined number of transactions is reached." 30:51-54).
- 6. The written specification of the '144 patent does disclose a variety of identifiers other than transaction identifiers, for example unique identifiers for registered users ("E-mail addresses are used to create unique identifiers for each registered user for file routing and billing purposes." 3:37-39), PC identifiers ("Later, at a predetermined time, a control module initiates a connection with the destination PC via an appropriate communications pathway, identifies the sending PC by its name and destination address, ..." 12:1-4; "Upon receiving a call, the receiving PC answers and reads a data stream from the modem to determine the sending PC identifier "18:39-41), and update identifiers associated with new software versions "Automatic updates is accomplished by transmitting, along with the new release version computer program, (1) an update identifier in the file list header for the packet that differentiates the update packetfrom other types of received files;" (29:43-47). The written specification does not, however, disclose a "transaction identifier," unique or not.
- 7. Source code listings, specifically Appendices A-D, were submitted with the '144 written patent specification. Several data structures in these source code listings contain a "Transaction

ID" field, which contains a number. At each computer the "Transaction ID" starts at 1 when the software starts up, and is then incremented on successive transactions. This "Transaction ID" is therefore not unique. Specifically, 1) different computers will use the same "Transaction ID" for different transactions and 2) when the software is restarted on the same computer, or the computer is rebooted, different transactions from the same computer will use the same "Transaction ID."

- 8. A person of ordinary skill in the art of the '144 patent as of the date of the alleged invention would understand "unique transaction identifier" to refer to information that uniquely identifies the transaction among all other transactions in the system. A person of ordinary skill in the art would also understand how to obtain such unique transaction identifiers using any one of a variety of mechanisms. These unique transaction identifiers, however, would be absolutely unique in that no two transactions in the system would ever have the same transaction identifier.
- 9. This is at odds with the disclosure of the '144 patent and anything identified in the '144 patent as comprising a transaction identifier. Indeed, as discussed both above and further below, the '144 patent does not teach the use of any such unique transaction identifier.
- 10. The "Transaction IDs" in the source code listings submitted with the '144 patent specification are not absolutely unique. This fact suggests that the inventors were only in possession of non-unique transaction identifiers. I note that comments in the source code listings submitted with the written patent specification identify that the "name" field of the "PBEFIXED" and "PBE" data structures should be unique. See, for example: "char name[32]; /* cannot be blank, should be unique */" at page 315 of the submitted source code listings. The source code listings contain no comments indicating that the "Transaction ID" discussed above should be unique. And in fact, as discussed above, the "Transaction ID" is not unique.

- 11. A person of ordinary skill in the art of the '144 patent at the time of the alleged invention would understand the term "unique transaction identifier" to refer to absolutely unique transaction identifiers. As discussed above, the "Transaction IDs" in the attached source code, however, are not absolutely unique and neither the patent nor the attached source code listings provides any guidance as to how unique a transaction identifier must be to be a "unique transaction identifier" as that term is used in the '144 patent.
- 12. I also note that the '144 patent specification discloses components of the disclosed system, for example log entries and confirmation receipts, that Plaintiffs may argue are unique to specific file transfers. There is no indication in the specification of the '144 patent that these components are intended to serve as the claimed "unique transaction identifiers." I further note that Plaintiffs' proposed claim construction for the claim term "unique transaction identifier" is "a unique name, number or symbol that identifies a transaction." Neither the written specification of the '144 patent nor the attached source code listings explicitly identify any "name, number or symbol" as the "unique transaction identifier." Nor have I been able to identify any such name, number, or symbol the components discussed above, for example, comprise multiple pieces of information such as times, dates, file structure, file name, electronic fingerprints (hashes) of transported files, and file characteristics. They are not a name, number or symbol.
- 13. Plaintiffs may argue that the disclosed "hashes" of transported files, which are a number, are the claimed "unique transaction identifier." This argument is without merit. Such hashes are not unique because different files may have the same hash. Plaintiffs may argue that, even though different files may have the same hash, the probability is low enough so that the hash is somehow unique enough to be the claimed "unique transaction identifier." The '144 patent

provides no indication of what would make a "unique transaction identifier" that is not unique, unique enough.

- 14. Plaintiffs may argue that the disclosed packet names are the claimed "unique transaction identifier." This argument is without merit. The patent discloses that the packet names are either selected by the user (see, for example, "Clicking on a Description box 66 results in a user prompt 68 which permits the user to name the file packet and add a text message that will be sent along with the selected files" 21:35-37) or selected using a random number generator (see, for example, "If the Description box 66 is not checked, no user prompt 68 is displayed, and the packet is created with a standard message and a random number as a name" 21:64-66). If the user selects the packet name, there is no guarantee that the user will choose unique packet names. If the system uses the random number generator to select the name, there is no guarantee that the generated random name will be unique. Plaintiffs may argue that, even though the generated random name may not be unique, it is somehow unique enough to be the claimed "unique transaction identifier." The '144 patent provides no indication of what would make a "unique transaction identifier" that is not unique, unique enough.
- 15. Because there is no written description or disclosure of any hypothetical level of uniqueness, any interpretation of the claim term "unique transaction identifier" as requiring some level of uniqueness is not supported by the specification of the '144 patent or the attached source code listings.

16. I so declare the forgoing to be true and accurate to the best of my knowledge this 8th day of August, 2013.

Martin Rinard, Ph.D.

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2	NORTHERN DISTRICT OF CALIFORNIA		
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	INTELLECTUAL VENTURES I, LLC and)		
4	INTELLECTUAL VENTURES II, LLC,)		
5	Plaintiffs,)		
6	-vs-) No. 1:11-cv-908-SLR)		
7	MOTOROLA MOBILITY, LLC,		
8	Defendant.)		
9)		
10			
11			
12	VIDEOTAPED DEPOSITION OF		
13	JACOB JORGENSEN		
14	March 6, 2013		
15			
16	Taken before JODIE BARRINGER MYERS		
17	Certified Shorthand Reporter		
18	State of California		
19	CSR License #3820		
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1	A. No. I don't.	1	responsibility for particular product components?
2	Q. Do you know if it was ever commercialized?	2	A. Yes.
3	A. I don't believe it was. No.	3	Q. Were you responsible for particular product
4	Q. And was it also demo'd at the trade show we	4	components?
5	talked about before?	5	A. My responsibilities varied with the progress of
6	A. No.	6	the company. But I was primarily involved with managing
7	Q. Was it demo'd anywhere?	7	the development of networking software, that would
8	A. I don't recall.	8	function to optimize the quality of service of data in
9	Q. And was it essentially the same product only it	9	the system.
10	operated in the 2.4 range, rather than the 5.8 range?	10	Q. When you say quality of service, what do you
11	A. Yeah. Exactly.	11	mean?
12	Q. All right. Other than those two were there	12	A. Quality of service relates to different aspects
13	any other Malibu Networks products that related to the	13	of data that depend on the type of data that is being
14	invention described in the 450?	14	dealt with. It could mean timing. It could mean
15	A. To my knowledge, there were only two products	15	bandwidth characteristics. Could be the liability of
16	that we were working on. One was the 5.8, and one was	16	transmission characteristics.
17	2.4.	17	Q. Okay.
18	Q. And you say we were working on. I understand	18	A. It's a difficult concept to define.
19	there was a team of engineers who wrote code.	19	Q. Okay.
20	With whom else were you working on these	20	So do I understand correctly the definition of
21	products?	21	quality of service would vary depending on the type of
22	A. What do you mean by "who else"? Are you	22	data you're talking about?
23	talking about corporate entities? Are you talking about	23	A. Yes.
24	engineers?	24	Q. With a particular type of data I'll give you
25	Q. Well, let's start with individuals. Were there	25	an example for uploading a spreadsheet. Are you able
	Page 55		Page 57
1	other individuals at Malibu Networks with whom you	1	to define the quality of service for that data type?
2	worked in developing these products, the 5.8 and the	2	MR. ALBERTI: Objection, vague.
3	2.4?	3	THE WITNESS: Yeah. I'm not sure if that
4	A. Besides engineers?	4	particular examples works for me.
5	Q. By engineers, are you referring to the	5	Q. MS. DECAIRE: I'll pick a different example.
6	engineers who wrote source code?	6	If the data type is email, are you able to
7	A. We had a number of people working for us in	7	define again, I'm working from, you told me the
8	engineering. Some were source code, some were modem	8	quality of service has different aspects and depends on
9	designers, some were chip designers. All sorts of	9	data type.
10	engineers.	10	I'm trying to figure out if for particular data
11	Q. So by category, if not by name, we have	11	types, there are rules. Can we define quality of service
12	engineers who wrote source code; we have engineers who		in the context of a particular data type. I just asked
13	designed modems. And I'm sorry. What was the third	13	about email.
14	one, category?	14	MR. ALBERTI: Objection, vague.
14 15	A. Chip designers.	15	THE WITNESS: I could offer an example of
14 15 16	A. Chip designers. Q. Chip designers.	15 16	THE WITNESS: I could offer an example of voice-over IP.
14 15 16 17	A. Chip designers. Q. Chip designers. Were there any other were there any	15 16 17	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you
14 15 16 17 18	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for	15 16 17 18	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may
14 15 16 17 18 19	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself?	15 16 17 18 19	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30
14 15 16 17 18 19 20	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself? A. Um, there were other management people who had	15 16 17 18 19 20	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30 milliseconds or so, as an example.
14 15 16 17 18 19 20 21	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself? A. Um, there were other management people who had related management responsibilities for developing a	15 16 17 18 19 20 21	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30 milliseconds or so, as an example. So providing adequate quality of service in
14 15 16 17 18 19 20 21	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself? A. Um, there were other management people who had related management responsibilities for developing a product component. I'm not sure that answers your	15 16 17 18 19 20 21 22	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30 milliseconds or so, as an example. So providing adequate quality of service in that occasion would be insuring that that next packet is
14 15 16 17 18 19 20 21 22 23	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself? A. Um, there were other management people who had related management responsibilities for developing a product component. I'm not sure that answers your question.	15 16 17 18 19 20 21 22 23	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30 milliseconds or so, as an example. So providing adequate quality of service in that occasion would be insuring that that next packet is transmitted in the required interval.
14 15 16 17 18 19 20 21 22	A. Chip designers. Q. Chip designers. Were there any other were there any individuals who had particular responsibility for development of these products besides yourself? A. Um, there were other management people who had related management responsibilities for developing a product component. I'm not sure that answers your	15 16 17 18 19 20 21 22	THE WITNESS: I could offer an example of voice-over IP. Q. MS. DECAIRE: That would be helpful. Thank you A. Where typical voice-over IP protocols may require the transmission of a data packet once every 30 milliseconds or so, as an example. So providing adequate quality of service in that occasion would be insuring that that next packet is

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Page 58 Page 60 1 1 voice-over IP? type. 2 2 You're saying adequate quality of service. Is Has to do with looking at packet headers, 3 3 identifying the type of data being transmitted, and adequate quality of service the same thing as optimizing 4 4 doing an -- and making sure the system behaves in an quality of service? 5 optimal fashion for that particular data. 5 Seems like a fine line. One could achieve 6 I think my question was, how do you know that 6 adequate -- I'm not sure that the distinction is -- if 7 7 there is any actual distinction between optimal and you've got the system behaving in an optimal manner for 8 voice-over IP data? 8 adequate in this case. 9 9 How do I know? Okay. All right. 10 Q. Is there a particular criteria that lets you 10 In terms of other product components -- and 11 know you've achieved that goal? 11 again, we're talking about these Malibu Networks 12 12 products, the 5.8 and the 2.4 -- are you able to recall Sure. If the voice at the other end is 13 intelligible, that would be an indication that you did a 13 other management people and for what product components 14 14 good job. they were responsible? 15 15 Okay. All right. I could potentially reconstruct it, but I don't 16 And you said something about looking at packet 16 remember it offhand now, no. 17 headers and identifying the type of data. We were 17 What would you need to do to reconstruct it? 18 18 talking about the particular example of voice-over IP, A. I'd have to go back and look at my list of and optimizing quality of service. 19 19 employees. 2.0 20 We may be able to do that. If we go back to Can you explain what looking at the packet 21 headers and identifying the type of data, how that 21 Jorgensen 2, we're back on the list of requests. If you 22 relates to the quality of service we were discussing? 22 look at request number 6, it asks about documents and 23 23 MR. ALBERTI: Objection, vague. things regarding marking of patent numbers on any 24 THE WITNESS: Well, there are a lot of details 24 products. 25 25 Do you know whether any of your patent numbers that are involved in doing that. It's been a long time. Page 59 Page 61 1 Q. MS. DECAIRE: Can you remember any of them' 1 in the telecommunications area had been affixed to any 2 A. One can identify the type of data, as I 2 products? 3 mentioned before. And the system can then respond by 3 Well, when you say product, to me product 4 4 behaving appropriately, according to the type of data in implies commercialization; and we never got to 5 that packet. 5 commercialization. So I don't believe this really 6 б Okay. applies. 7 7 I think when we started down this road, I was Q. And when you say we, we're talking about Malibu 8 Networks; correct? asking about responsibility for product components by 8 9 particular members of the management team. And you had 9 Yes. Α. 10 said that you were primarily responsible for networking 10 Am I understanding correctly that there is no 11 software to optimize the quality of service. Particular 11 other entity with which you were involved that 12 12 commercialized products that related to the invention 13 And again, I am not trying to be difficult. But 13 described in the 450 patent? 14 I'm trying to figure out or to see if you know how one 14 That's correct. 15 determines whether the quality of service for any 15 Request number 7, if you look at it, relates to 16 particular data type has been optimized. I think for 16 journals, papers, publications, relating to the subject 17 voice-over IP, you told me if the voice is intelligible 17 matter of the 450 patent. 18 at the other end. Is that true? 18 Did you look for any papers that you authored 19 A. Uh-huh. 19 that related to this subject matter? 20 Q. Are you able to think of another example? My 20 Did I look for? No, because there weren't any. 21 spreadsheet was not a good one. 21 Q. Okay. 22 22 Well, random example. An FTP file download. If We talked a little bit about what you described 23 the file is intact at the other end, they're not missing 23 as the iterative process that you collaborate in 24 -- there are no errors, that would be an indication of 24 generally with respect to patent applications on which

16 (Pages 58 to 61)

you're the inventor. Am I understanding that you do not

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adequate quality of service, for that particular data

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1	Q. Why not?	1	well-defined portion of data, of the packet, that
2	A. Because the CPE, as we described it, included	2	describes some qualities or some related data about the
3	the wireless components required to communicate. And	3	payload.
4	that can be part of a mobile device, as an example. But	4	Q. So if we have a packet, a packet is comprised
5	if it's a stationary device such as a PC or laptop, it's	5	of a packet header and a payload?
6	probably not. At least not when we were thinking about	6	A. Yes.
7	this.	7	Q. Before I forget, you had mentioned devices
8	Q. But did I understand correctly that a	8	behind the CPE. I think an example was a PC; another
9	stationary modem could be a CPE?	9	example was a handheld, although a handheld could also
10	A. Yes.	10	be a CPE. Are you able to give me other examples of
11	Q. Okay. What are the essential characteristics	11	devices behind the CPE?
12	that define a CPE in this context?	12	A. Well, let's see. There is a laptop. There is
13	A. It would be the RF components, and the	13	there could be a desktop computer. Could be a server.
14	management of packet flow from the RF portion of the	14	Could be a router. Could be a switch. Could be a numb
15	device to the networking connect. Ethernet connect,	15	of different networking devices.
16	would be an example.	16	Q. Okay. All right.
17	Q. Okay. All right. Anything else?	17	And this sentence, "The system identifies
18	A. Anything else?	18	traffic flows based in part on data in packet headers at
19	Q. Anything else that is required for a device to	19	level 4 through 7," do you recall whether you were
20	be a CPE in this context?	20	discussing identification of traffic flows on the basis
21	A. In what context?	21	of all of the headers from levels 7 through 4?
22	Q. In the context of this Malibu Networks system	22	A. No. We recognized that different types of
23	we've been talking about.	23	traffic would you know, TCPIP traffic would require
24	A. Well, most of the time the CPE also had other	24	different packet header levels to be analyzed. I don't
25	parts that would include management, software, so that	25	remember the exact specifics of how that decision was
	Page 107		Page 109
1	it could be remotely managed, if necessary. Or	1	made in real time.
2	provisioned or, you know, updated.	2	But it was, you know, either the entire set or
3	So there are other portions of the CPE in	3	some subset of, I think is what we intended.
4	there, besides just the strictly RF portion and the	4	Q. You just don't remember which it was?
5	networking portion.	5	A. No.
6	Q. We started on this because you had told me that	6	Q. You know, up at the top of the next page, 5819,
7	a PC could not be a CPE, because it lacked, as I	7	down in the corner, the first full paragraph talks about
8	understood it, the RF components.	8	using hierarchical class based queueing.
9	A. Right. Unless it had, you know, an RF card like	9	Is queueing the same thing as identifying
10	say, in it, that did the RF portion of it. Yeah.	10	separate traffic flows?
11	Q. Okay. And we had started on this whole thing by	11	A. No.
12	me asking about traffic flows.	12	Q. What is the difference? Or what is queueing, I
13	The sentence goes on to say: "identifies	13	guess we'll start with?
14	traffic flows based in part on data in packet headers,	14	A. Well, queueing is a technical term in this
15	at levels 4 through 7."	15	context. Alone, it describes the sequential order of
16	What do you understand is being referred to	16	some quantity such as packets or data. So it's an
17	here with levels 4 through 7?	17	ordering of.
18	A. It's the standard networking protocol model.	18	Q. Okay. All right.
	You find that in most networking textbooks, to describe	19	The third sentence down, it starts with the
19	-	0.0	
20	the different layers involved.	20	emergence of real-time packet applications. It says,
	-	20 21 22	emergence of real-time packet applications. It says, "Bandwidth alone is not sufficient to guarantee quality of service."

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I think this relates back to what we were

talking about a few minutes ago when you said that the

Malibu Networks system was aimed at other QoS qualities

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Packet headers. What is your understanding of

In TCPIP, the Internet protocol, it's a

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24

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what a packet header is?

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that were not adequately accounted for by the ATM switch technology. Am I understanding that correctly? MR. ALBERTI: Objection. Vague. THE WITNESS: That is a complicated questions. Maybe you can break that down for me. Q. MS. DECAIRE: That is okay. We don't need to do that. If we go down to the second paragraph up from the bottom of the page, it says, "In order to allocate and manage bandwidth, latency and jitter were two of the characteristics or qualities that you told me were not adequately accounted for by ATM switch technology. Is that correct? A. Not necessarily. Right. Q. All right. So in order to manage these qualities, the framework of class hierarchies is established by the system. Do you know what that means, the framework of class hierarchies that is established by the system. Do you know what that means, the framework of class hierarchies that is established by the system. A. No. I don't recall specifically what I meant by the headers at levels 4 through 7? A. No. Page 111 identification of traffic flows based on data and packet headers at levels 4 through 7? A. No. Q. You don't know one way or the other sitting here today? A. No. Q. Final paragraph on that page 5, which is 5819 Page 111 that were not adequately accounted for by the ATM switch technology. Is the correct? A. What is the portion of the system that is providing direction to the MAC layer; is that correct? A. What is? Well, it has to do with the definition of a MAC layer. In general terms, we're talking about the part of the system that is structuring payloads to be transmitted over wireless, in a manner that follow direction of this particular portion of the system. Q. Okay. When you say this particular portion of the system that is established by the system? This part of the system that is sensing the Q requirements. Q. That is the same part of the system that is identifying the traffic flows? A. Yes. Well, yes. A. No. G. Final paragraph on that page 5, which is 5819	,
2 technology. 3 Am I understanding that correctly? 4 MR. ALBERTI: Objection. Vague. 5 THE WITNESS: That is a complicated questions. 6 Maybe you can break that down for me. 7 Q. MS. DECAIRE: That is okay. We don't need to do that. 9 If we go down to the second paragraph up from 10 the bottom of the page, it says, "In order to allocate 11 and manage bandwidth, latency and jitter —" and I 1 adequately accounted for by ATM switch technology. Is 14 that correct? 15 that correct? 16 A. Not necessarily. Right. 17 Q. All right. 18 So in order to manage these qualities, the 19 framework of class hierarchies is established by the 20 system. 21 Do you know what that means, the framework of 22 class hierarchies that is established by the 32 that. 22 A. No. I don't recall specifically what I meant by 24 that. 25 Q. Do you know if it relates back to the Page 111 1 identification of traffic flows based on data and packet 2 headers at levels 4 through 7? 3 A. It may. I don't know. 4 Q. You don't know one way or the other sitting 5 here today? 5 A. No. 5 when I say arriving into the base station your understanding, that is being from the networ worule that is being from the networ to 4. Right. And from the client's side, it would from the dient's side, it would from the client's side, it would a A. Right. And from the client's side, it would a A. Right. And from the client's side, it would from the definitions. 6 Q. From client-generated applications through CPE to the base station? 8 A. Right. And from the client's side, it would from the definition of the system that is providing direction to the MAC layer? A. What is 'the portion of the system that is structuring payloads to be transmitted over wireless, in a manner that follow	
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6 A. No. 6 Q. Just to be complete, what is the MAC laye	
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2. I mai paragraph on that page 3, winch is 3017 7 11. Product recess Control. That is one of the	
8 in the corner, it says, "Arriving packets are mapped 8 layers.	
9 into classes utilizing packet header information and 9 Q. This portion of the system that structures	
10 user profile information." 10 payloads to be transmitted in a manner that confo	ms to
Do you know what arriving packets, do you know 11 this QoS system, where is that in the stack?	
12 what packets that refers to? 12 A. Repeat the question please.	
13 A. Packets well, the portion of the system that 13 Q. I may be twisting your words. I've understand	od
14 is providing direction or information to the MAC layer 14 there to be a portion of the Malibu Networks syst	
15 receives a packet. 15 structures payloads to be transmitted that are goin	
Now the packet can be received from a client's 16 go down to the MAC layer, in a manner that follows:	
17 side CPE device, or it could be from the base station, 17 QoS system.	
18 from a network, you know, the network side. 18 A. Right.	
So it's not specific to, you know, one side of 19 Q. Where is that portion of the Malibu Netwo	ks
the network or the other. So arriving packets just means 20 system in terms of the stack?	
packets that are coming into the system from whatever 21 A. Oh, it's not contained in one of those layer	ı
22 source. 22 Diagrammatically speaking, one could create a ve	
23 Q. Is it packets that are coming into the base 23 box, beside all of the different layers, because inp	.
24 station? 24 from different layers is going into this vertical bo	rtical
25 A. Or from the client's side. It's the same 25 and processing is occurring. And then instruction	rtical ıt

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	Page 114		Page 116
1	that to be directed at the MAC layer.	1	misleading, if applied to this system.
2	So I wouldn't say it's segregated to a	2	Q. Okay. Okay.
3	particular layer.	3	And these other qualities that you're talking
4	Q. So as packets are working their way down from	4	about, are they they track back to the application
5	the application layer, down	5	from which the data is coming?
6	A. Well, the data for decision-making emanates	6	A. Sometimes they may. Yes.
7	from multiple layers. It's not a question of working	7	Q. And other times they're dictated by some
8	down the layers.	8	other
9	Q. Okay. So the data for decision-making emanates	9	A. Well, we may not have information available in
10	from multiple layers. The decision-making, you mean tl	ne 10	the packet to do that.
11	identifying of traffic flows?	11	Q. Okay.
12	A. No. The actual sequencing, the structure of the	12	A. In the header. Sorry.
13	payload that will be transmitted.	13	Q. Okay.
14	Q. When you say the structure of the payload that	14	At the beginning of the next page, page 6, it's
15	will be transmitted, are you talking about the payload	15	5820, Bates labels. At the top it says, "Once a flow is
16	of individual packets, or group of packets?	16	mapped to a class" I know we've talked about the
17	A. No. The payload of a MAC layer. So the MAC	17	system identifying traffic flows based in part on data
18	layer may transmit data from just one packet or multiple		at packet headers, at least in levels 4 through 7.
19	packets. And if so, the order of the packets may be	19	We've talked about arriving packets that are
20	changed, depending on the processing that occurred. So		mapped into classes using the packet header informatio
21	that is what I mean by structure.	21	A. Yes.
22	So it would be which packets and what order.	22	Q. So my understanding, we've got two different
23	Q. And the decision as to which packets and in	23	things: A packet is identified as belonging to a
24	what order is made on the basis of data from all of the	24	particular traffic flow, but it's also mapped to a
25	multiple layers?	25	class. Correct?
	Page 115		Page 117
1	A. Right.	1	MR. ALBERTI: Objection to form.
2	Q. How does that data come to the MAC layer?	2	THE WITNESS: Objection, what?
3	A. It's this process this process is occurring	3	MR. ALBERTI: To form.
4	in real time. The data gathering that is gathering the	4	MS. DECAIRE: It's a lawyer thing.
5	packet header information, identifying the flows,	5	THE WITNESS: I'm not sure I follow what you
6	understanding what their QoS requirements are, and the		said.
7	creating a structure of data for the next payload.	7	Q. MS. DECAIRE: I don't either, which is why I'n
8	Q. Okay.	8	asking.
9	A. So it's a separate process.	10	A. I'm not making a distinction in the use in
10	Q. All right.	10	this first paragraph where the word "class" is used,
11	A. And this process is graphing the arriving	11	that is not to be distinguished from how do I explain
12 13	Q. And this process is mapping the arriving packets into classes?	12 13	this? Let me go back.
13	•	13 14	Q. Okay. A. So a class in this case, I believe, from what
15	A. No. Q. No?	15	A. So a class in this case, I believe, from what I'm reading here, does not necessarily mean priority,
16	Q. No?A. It's more fine-grained than that.	16	like first priority, second priority, third priority.
17	Classes usually implies two or three or four	17	Those are different classes. No. It's more like, is it
18	groups of priorities, such as exists in the ATM world.	18	jitter sensitive? Is it FTP download, where we have to
19	Here we're talking about, you know, much finer	19	have absolute accuracy? Is it, you know, random HTT
20	gradations. And it would be incorrect to to call them	20	traffic that is not that important? Does it belong to a
21	priorities, because priority implies a time element.	21	customer with a low SLA class? So it doesn't matter
22	It's not necessarily a result of just a time	22	what much what we do, because they're paying, you
	implementation. May be other factors.	23	know, a low subscription rate for the service, or
23			
23 24			
23 24 25	So we don't really talk about priority, because of the fact that it's already got a definition that is	24 25	something like that. So class in this definition is not a strictly-

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	Page 118		Page 120
1	defined set of criteria. It's more a relative comparison	1	In this analysis phase, packet headers are
2	of treatment.	2	analyzed, and packets are classified in terms of which
3	Q. Okay. And it's treatment related to quality of	3	of the classes they belong to, in this context, where
4	service considerations?	4	class is not determined on the basis of priority, but
5	A. Right.	5	rather on the basis of QoS characteristics? Correct?
6	Q. And those considerations are on at least some	6	A. Yes.
7	level application specific; correct?	7	Q. Okay. All right.
8	A. Yes.	8	Before we plow through the rest of this, it's
9	Q. Well, now we get down to the first sentence in	9	probably a good time for a break, if that is okay with
10	the next paragraph.	10	you.
11	It says, "A selector mechanism is utilized to	11	MR. ALBERTI: That sounds fine.
12	sequence packets into queues maintained by the MAC	12	MS. DECAIRE: Is that all right with you?
13	layer."	13	THE WITNESS: Yeah.
14	A. Where are you reading?	14	VIDEOGRAPHER: Off the record at 12:26.
15	Q. The very next paragraph on page 6,. It's 5820	15	(Noon recess taken.)
16	at the bottom.	16	VIDEOGRAPHER: Back on the record at 1:56.
17	It says, "A selector mechanism is utilized to	17	Q. MS. DECAIRE: Okay. Before we took a lunch
18	sequence packets into queues maintained by the MAC lays	er 18	break, we were looking at the document entitled "The
19	for transmission across the wireless medium. Queues do	19	Malibu Networks, WINAAR System Architecture," beginning
20	not map one-to-one to classes."	20	Bates numbers 5815. I have labeled it Jorgensen 5.
21	So now we've got traffic flows; we've got	21	I had focused on the text in the Section 4
22	classes that I understand in the context of the Malibu	22	called Quality of Service Considerations. And I want to
23	Networks project to be related to quality of service	23	make sure I'm understanding correctly what we talked
24	parameters. And now we've got selector mechanism, that	24	about.
25	sequences packets into queues maintained by the MAC.	25	My understanding was that information in the
	Page 119		Page 121
1	Does that selector mechanism operate on the	1	layer in a packet at layer 4, TCP packet, the system
2	basis of traffic flows or classes, or both, or something	2	uses information in the TCP packet to identify a traffic
3	else?	3	flow. Is that correct?
4	A. So I believe what I may have been addressing	4	A. Yeah.
5	here and I'm not recalling specifically is that	5	O. So this is to this creates traffic flows on
6	the once the packets packet headers have been	6	the basis of information that is in the TCP packets?
7	analyzed and classified, in other words, their	7	A. It doesn't create them. It is informed about
8	characteristics their salient characteristic have	8	what the traffic flows are.
9	been identified for QoS purposes, once that analysis	9	Q. It identifies them.
10	phase has been completed, there is then a mechanism that		And then the packets that are in those traffic
11	operates on constructing the payload, based on those	11	flows are further classified according to QoS
12	parameters.	12	characteristics?
13	So I believe that may be what selector	13	A. Categorized, or there is information that is
14	mechanism is addressing.	14	obtained, describing the QoS requirements.
15	Q. And the selector mechanism would be immediately		Q. And then we had looked at the page that is page
16	before the MAC layer? Yes?	16	6, 5820, and it talks about the selector mechanism. An
17	A. Building the payload in the MAC layer, yes.	17	the selector mechanisms uses information about the
18	Q. So it's building the payload portion of the MAC	18	traffic flow, and this class, or categorization, to put
19	PDU?	19	packets in queues at the MAC layer?
20	A. Yes.	20	A. Into which is used to structure the MAC layer.
21	Q. And this analysis phase precedes the selector	21	The payload of the MAC layer.
22	mechanism, necessarily?	22	Q. It's used to structure the payload of the MAC
23	A. They're all operating concurrently. But for a	23	layer. Okay.
24	given packet, yes.	24	Are the MAC packets created at the same time as
25	Q. I'm sorry. That was imprecise.	25	this queueing process, before it, after it?

31 (Pages 118 to 121)

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Page 122 Page 124 1 Q. 1 There are no MAC packets. They're just It's more than just the MAC layer? 2 transmitted as data in the MAC layer. So there is no 2 A. 3 3 encapsulation that occurs. What is the application and data link manager? Q. 4 Does the MAC layer add a header to the packet? 4 Is that one level up? O. 5 A. 5 A. Frankly, I don't remember. 6 Q. It does not. Okay. All right. 6 Q. Okay. You know, I'll mark -- there is another 7 7 Skipping over Section 5, which is the security, version of this document that might help. 8 and looking at Section 6, which is entitled "System 8 I am marking as Jorgensen 6 a document entitled 9 9 "Malibu Networks, WINAAR System Architecture." It's also Architecture and Design," and we're still in Jorgensen 10 5. First sentence, "The Malibu Networks system consists 10 dated June 16th, 1998. It's Bates labeled Jorgensen 11 of a wireless access point..." I understand that to be 11 005835 through 5843. 12 the base station; correct? 12 (Defendant's Exhibit J6 marked.) 13 13 Uh-huh. MS. DECAIRE: I ask you to take a look at this. A. 14 "...and fixed user CPE stations." 14 Q. It looks to me like -- what number? Sorry. 15 What does it mean to add "fixed user CPE 15 Can you look at the exhibit sticker? I think I 16 stations"? 16 may have put the wrong number on it. Yeah. It should be 17 This is describing the first system. This is 17 6. My apologies. 18 18 not like a patent application, or we're worried about This looks to me to be a red-lined version of 19 scope. We're just describing what we have, and the 19 Jorgensen 5 that we were just looking at. And it's got 20 intended demo environment for this is, you know, a fixed 20 some additional figures or images in it. 21 CPE. 21 Do you recognize this? 22 Q. And I guess what is a fixed CPE? 22 Yes. A. 23 23 Is the red-lining yours? A. Meaning it's meant to be in a home or office, Q. 24 I don't remember. not a mobile environment, because it has an AC plug in 24 A. 25 25 Q. Okay. Page 125 Page 123 1 O. Okay. 1 Do you remember adding the figures? There is a 2 On the next page, which is page 8 of the 2 figure 1.1 and a figure 5.2. 3 document, it says 5822 at the bottom. 3 A. Well, I remember the figure 1.1. It's an eye 4 4 It lists key software components. It includes a chart. It's very small. 5 Yes. I remember that also. radio link manager and an application and data link 5 6 б manager. The next paragraph describes the radio link If you look at the figure 5.2, if I achieve the 7 7 manager, as comprised mostly of a specially designed MAC proper distance here, I see that there is a square 8 8 corresponding to the radio link manager, and it is 9 9 immediately to the left of the wireless MAC layer Are you able to explain to me what the radio 10 10 link manager is, and what it does? engine. We talked earlier about a selector. 11 11 The selector mechanism, where is that in this In very general terms, because I don't remember 12 12 the fine details of it, but the idea is that the MAC diagram? 13 layer is a tightly structured framework that contains 13 Let me see. I guess in this diagram, it would 14 data, but also contains areas for communications between 14 have to be part of that wireless MAC layer engine. 15 the CPE device and the base station device, and you 15 Okay. All right. 16 know, doing housekeeping and status updates and such 16 And I see in this diagram, the application and 17 things as that. 17 data link manager is on the bottom row; it's one row underneath the wireless MAC layer engine, and the radio 18 Q. Okay. 18 19 So in other words, we created the configuration 19 link manager. 20 of the MAC layer. We did not borrow from some premade 20 Does that help you to recall at all what that 21 MAC layer. 21 application and data link manager is? 22 So is the radio link manager, it is the MAC 22 No. At this point I can only guess. 23 layer which Malibu Networks specially designed to 23 If you go back to figure 1.1, which is a little Q. 24 account for these special quality of service factors? 24 better, but not a lot, do you remember this figure? 25 A. In part. 25 A.

32 (Pages 122 to 125)

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Jacob Jorgensen

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- 1 Q. Did you create this?
- 2 A. Yes, I did.
- 3 Are you able to walk me through it? Q.
- 4 A. Well, I think the key component of this
- 5 diagram, I think the whole reason for this diagram is
- 6 that vertical IP flow box, that I mentioned previously,
- 7 where data from different packet layers, packet headers,
- 8 are gathered and used to guide the operation of the MAC
- 9 layer.
- 10 Q. And the data gathered in these two vertical IP
- 11 flow boxes that are on either side of the stack, the
- 12 data flows into the MAC layer where it is used to
- 13 identify traffic flows?
- 14 The data from the vertical box is symbolic of
- 15 the gathering of the relevant IP packet header data.
- 16 That data is used as a resource in creating the
- 17 structure of the particular MAC layer data payload.
- 18 And is it used in the manner we previously
- 19 discussed where traffic flows are identified, classes
- 2.0 are created, and then that information is used to create
- 21 queues? And all of that factors into creating the MAC
- 22 layer payload?
- 23 MR. ALBERTI: Objection, vague.
- 24 THE WITNESS: Not necessarily queues. There is
- 25 an assumption that queues are involved, and they may not

1 A. So there are different stages. I mean, first of 2 all, the system needs to identify flows. And then it 3 analyzes them, and then it categorizes them, and then 4 uses that information to structure the payload.

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Okay. All right. Thank you.

I don't know. If you look at figure 5.2, if I try to identify where in this diagram the invention that is described in the 450 packet is present, would it be in that wireless MAC layer engine?

MR. ALBERTI: Objection, calls for legal conclusion, calls for expert testimony.

THE WITNESS: I'm not sure I would -- this is not meant to be a definitive system schematic. It's meant to represent areas of software that are utilized. So it doesn't mean to represent a flow model or anything like that.

MS. DECAIRE: Okay. That makes sense. All Q. right.

Earlier when we looked at the 450 patent, we had looked at the face of it, and you said you remembered the provisional application that is cited there. And I'm going to mark as Jorgensen 7 a document that I believe to be a copy of that provisional application.

(Defendant's Exhibit J7 marked.)

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- 1 be. For one.
- 2 MS. DECAIRE: Okay. Okay. Q.
- 3 And I'm not sure about the rest of your A.
- 4 question.
- 5 And I'm sorry to belabor this. I just want to Q.
- 6 make sure that we understand.
- 7 Does the identification of traffic flows happen
- 8 on the basis of information that is collected in the --
- 9 I understand this is a symbolic representation. The 10
- identification of traffic flows happens on the basis of
- 11 information that has been selected at these top four
- 12 layers of the stack; correct?
- 13 A. Yes.
- 14 And then that information about traffic flow
- 15 factors into structure in the MAC payload; correct?
- 16 A.
- 17 All right. And likewise -- I don't want to say Q.
- 18 the prioritization -- but the classification or
- 19 categorization that happens on the basis of QoS
- 20 characteristics also factors into structuring the
- 21 payload at the MAC level?
- 22 What do you mean, also? I thought that that
- 23 was the intent of the first statement you made.
- 24 Sorry. I'm differentiating between identifying
- 25 traffic flows and classifying or categorizing.

- 1 0. MS. DECAIRE: We'll ask you to take a look at
- 3 A.
- 4 Q. You do not recognize this document?

that and and see if you recognize it.

- 5 Who is --A.
- 6 Q. That was going to be my next question.
- 7 A. Who is that?
- 8 Who is Ahmadreza Rofougaran? Q.
- 9 A. I have no idea.
- 10 If you look at the document on the upper edge
- 11 of the right side, there is a stamp that has a bar
- 12 stamp. It says U.S. PTO, and then it has 60/092452. If
- 13 you compare that number to the number of the provisional
- 14 application that is listed on the face of the 450
- 15 patent, they do match; correct?
- 16 A. They seem to.
- The same number appears on the left side, and a 17
 - much easier to read format. If you look at that stamp
- 19 on the right side or top left, there is a date, July
- 10th, 1998. 20

18

- 21 Α. Uh-huh.
- 22 Is that -- does that comport with your memory
- 23 of the timeframe during which you filed the provisional
- 24
- 25 I don't really remember. It's conceivable.

33 (Pages 126 to 129)

REDACTED IN ITS ENTIRETY

REDACTED IN ITS ENTIRETY

In The Matter Of:

v. MOTOROLA MOBILITY, LLC

RANDY H. KATZ, Ph.D. - Vol. 1 July 17, 2013

MERRILL CORPORATION

LegaLink, Inc.

135 Main Street 4th Floor San Francisco, CA 94105 Phone: 415.357.4300 Fax: 415.357.4301 Page 70

THE WITNESS: So let me, let me try and 1 2

understand the example that we're considering. Two 3 different base stations, two different subscribers,

within range of both base stations? 4

5 BY MR. ALBERTI:

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Q. Yes. Assuming, again, that I'm only going to 7 talk to my AT&T base station and you're only going to speak to your Verizon base station. So let's, let me first frame, frame the issue this way.

10 You would agree that those two base stations, 11 even though they're speaking -- providing different 12 frequency bands to their respective customers, they are 13 sharing bandwidth, true?

A. Sorry. Sharing bandwidth among whom at this 14 15 point?

Q. Well, I had asked you before whether you would consider AT&T and Verizon to be sharing wireless bandwidth even though each has their own assigned frequency bands to provide to their customers, and --

A. Within, within one base station.

Q. Yes. 21

22 A. I think was the example that we had before.

And, and my answer was that within the totality of 23

24 capacity, you know, to pump information or voice or

25 whatever, it is being -- that, that capacity is being

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Q. Did you follow that? 1 2

A. So, so there's no communication possible from 3 one base station to the other in a conflicting

4 frequency.

5 Q. No.

6

A. Okay.

Q. In that situation, would you say the base

8 stations are sharing wireless bandwidth? 9 A. So I think I still would say that they're

10 sharing wireless bandwidth for the following reason, 11 that in the union of the frequencies between the two

12 base stations, there is a total capacity for carrying

13 information. And one, one base station could transmit

14 at a higher power and, or it could have a greater 15 frequency range and so support a larger number of

16 customers than the other one.

17 There are ways of slicing and dicing sort of the fixed totality of bandwidth that's available in the 18

union of the two base stations. So in that sense, it's like a pie that's being sliced up and, you know, you 20

21 have half the pie and I have half the pie. Are we not

22 sharing the pie?

23 Q. And then now let me go to my final 24 hypothetical with this, is if in that same scenario

where you have two base stations, each with a fixed and

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1 shared between the AT&T customers and the Verizon customers. That, that is what I believe I said. 2

O. Okav.

4 A. And we're now considering another example with

5 two base stations. But my question was, to understand

6 the scenario that we're talking about, to kind of come

7 back to a physical principle of radio communication, if

8 I have two base, two base stations that can hear each

other and they are both communicating on the same

10 frequencies, they -- basically, two nearby base stations

11 share the ability to encode information into the

12 frequency range that they're operating in. And

13 there's -- if they're both communicating in the same

14 frequency at the same time, they will conflict with each

15 other.

16 So the reason to bring that up is that there 17 is a fixed capacity that you can encode in the sort of

18 frequency ranges. So I'm a little confused about the

possibility of interference if the base stations are 19

20 close by, as opposed to if they're far apart.

21 Q. Yeah, and I'm sorry, maybe my example wasn't

22 specific enough. But I believe in my first example

23 where we had Verizon and AT&T we agreed that they were

24 speaking on completely separate frequency bands.

25 A. Uh-huh. mutually exclusive bandwidth, and we have two cell

phones speaking to the two different base stations. Are

the two cell phones in that example sharing wireless 3

4 bandwidth?

6

5 MR. SANDERS: Objection to form.

THE WITNESS: I have to admit, my mind

7 wondered a little bit there, so could we go through that

8 example again?

9 BY MR. ALBERTI:

10 Q. So we have our two base stations, each 11

providing a fixed frequency band that is, that are mutually exclusive, okay. We'll say one is AT&T and one 12

13 is Verizon. And we have now two cell phones, one

14 speaking to the AT&T base station and one speaking to

15 the Verizon base station. In that example, would you

16 say that the two cell phones are sharing wireless

17 bandwidth?

18 A. Again, I would say the answer is yes, because

19 I go back to my analogy with the pie. The pie is

divided in half, half -- so there's the pie. The pie is

21 the thing being shared. We divide it in half and say

22 this half is the Verizon side and this is the AT&T side.

23 And I think, if I understood your example, we're taking

24 another slice out of that and saying -- is it Dave?

25 Q. Yes.

19 (Pages 70 to 73)

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Page 74 Page 76

- 1 A. Dave gets this slice and Randy gets this
- 2 slice. We're still sharing the pie.
- 3 Q. Okay. Let's move on to our next term, "packet-centric protocol." Let's start with the term 4
- 5 "protocol." What's a protocol?
- 6 A. A protocol is a, a set of standard ways of
- 7 interfacing, of handshaking, to accomplish a particular
- 8 function. A protocol could be the way in which you do a
- 9 medical diagnosis or something like that. But it's a
- 10 standard sequence, a standard set of operations followed
- 11 in a standard sequence to accomplish a particular task.
- 12 Q. Would you agree, a protocol is not a physical 13 thing?
- 14 A. I guess, what do you mean by a "physical
- thing"? 15
- 16 Q. Device.
- 17 A. A protocol is not a device.
- 18 O. Have you heard of the term "circuit-switched 19 protocol"?
- 20 A. I have.
- 21 Q. What is a circuit-switched protocol?
- 22 A. A circuit-switched protocol would be one that
- 23 establishes a connection between end points for the
- 24 purposes of communication exchange between those two end
- 25 points.

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3

sequence that packets are received do not necessarily need to be in the order that they were sent in order to be able to communicate information?

- 4 A. I would say that the sequence of packets that 5 are delivered above the TCP layer are in sequence. So
- for something built upon the TCP protocol, the packets
- 7 would appear in sequence, which I think is not what you 8 said.
- 9 Q. Well, I think the question was in TCP/IP, the 10 sequence that packets are received at an end point do not necessarily need to be the same sequence that they 11 12 were transmitted from a different end point in order to be able to communicate information. 13
 - MR. SANDERS: Objection to form. THE WITNESS: And I think I disputed that.
- Q. So in the Internet, if I send an email using TCP/IP, the packets have to leave in a specific sequence from my computer and be received in the exact same 20 sequence by the receiving computer?
- 21 A. What you just said is something different.
- 22 You said previously that -- you described the end point.
- And the end point for TCP is the email application that 23
- lives on top of TCP and its session interface. So have
 - you ever received an email message where you received

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- O. You've heard of the term "packet-switched protocol"? 2
 - A. I have.
- 4 Q. What is a packet-switched protocol?
- 5 A. A packet-switched protocol, there's a couple 6 of, couple of pieces to that.
- 7 The packet is a way of taking a large set of 8 information to be communicated and dividing it up into
- 9 more primitive elements to be communicated in a 10 sequence. So a packet is like a subset of the
- communication. And a packet-switched protocol is one 11
- 12 which allows, allows the end points to exchange
- 13 information on a packet-by-packet basis.
- 14 Q. Would you agree that in a packet-switched 15 protocol, the packets do not necessarily need to be sent and received in a specific sequence in order to 16 17 communicate information?
- 18 A. Well, it depends on, on what we are describing 19 as a packet-switched protocol.
- 20 Q. In your understanding of packet-switched --21 can you give me an example of what a packet-switched 22 protocol is.
- A. Well, an example of a packet-switched protocol 23
- 24 would be the transmission protocol of the Internet.
- 25 Q. Would you agree in TCP/IP that the specific

- the, "Yours truly, Randy" before you received the "Dear
- David." No. At least I've never received such a thing
- 3 in my experience.

BY MR. ALBERTI:

- 4 So to the point of that end point, and the
- 5 output from the processing of the TCP protocol, what is
- delivered as the result of the TCP protocol to
- 7 applications running on top of the TCP protocol would be
- the sequence of data arrived in the same sequence in
- 9 which it was sent.
- 10 Q. Of course. I think it may be my, my -- again, 11 my question wasn't precise enough. But if we call the 12 end points just the actual computers and not the
- 13 application layer sitting on top of TCP/IP, but actually 14 the actual physical layer from one computer to another 15 computer -- are you following me so far?
- 16 A. So I think our -- but that's not, what you 17
- just described isn't TCP. 18 Q. Well, would you agree that packets that are communicated over the Internet are communicated using 19 20 TCP/IP protocol?
 - A. I agree with that statement, yes.
- 22 Q. So if there are packets communicated using the TCP/IP protocol from, say, computer A, my computer, to computer B, your computer, do they have to be sent and
 - received in the exact same order in order to be able to

20 (Pages 74 to 77)

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5424RANDY H. KATZ, Ph.D. - 7/17/2013

Page 78 Page 80 communicate information? Q. Would you agree that packets sent from my 2 A. But -- sorry. But what protocol are we 2 computer to your computer using the IP packet-routing 3 talking about being used in order to deliver those protocol do not have to be sent and received in the same 4 packets? 4 order? 5 Q. Well, I thought we, I thought we had agreed 5 A. As ...? As sent? 6 that packets can be communicated over the Internet using 6 Q. Yeah. They do not have to be received in the TCP/IP. same order as sent in order to, for our two computers to 8 Yes, I agree with that statement. 8 communicate information. 9 Q. So the packets, again, if we're just talking 9 MR. SANDERS: Objection. 10 10 about packets that had been encoded using TCP/IP and THE WITNESS: I would agree that a sequence of communicated from computer A to computer B, the way that 11 packets sent from one computer to another computer using 11 12 they get from computer A to computer B may differ on a the IP routing protocol do not need to arrive in the 13 packet-by-packet basis, true? 13 same sequence as sent. 14 A. The way in which packets go from one computer 14 BY MR. ALBERTI: 15 to another computer does not involve TCP. 15 Q. I think we're about out of tape, so --Q. Okay. Fine. But you agree that those packets 16 16 A. Okay. 17 do include information encoded using TCP/IP. 17 Q. -- let's take our next break. 18 A. Include information encoded using TCP, yes, I 18 A. Thank you. 19 19 agree with that. THE VIDEOGRAPHER: This marks the end of tape 20 Q. So you would agree -- first of all, is TCP/IP 20 number one. Going off the record, the time is 11:04. 21 packet-switched? 21 (Recess) 22 A. TCP --22 THE VIDEOGRAPHER: This marks the beginning of 23 MR. SANDERS: Objection, form. 23 tape number two. Back on the record, the time is 11:15. THE WITNESS: TCP/IP is a packet protocol. 24 2.4 BY MR. ALBERTI: 25 It's possible to implement TCP on a variety of 25 Q. So since you like to be precise, I think, I Page 79 Page 81 underlying communication mechanisms, including circuit have a way that might speed up our conversation a little 2 switched mechanisms. bit. 3 3 BY MR. ALBERTI: I'm going to mark our next exhibit. This will 4 Q. Is TCP/IP packet-switched or circuit-switched? 4 be Exhibit 6. It is an article entitled "Beyond Third 5 MR. SANDERS: Objection to form. Generation Telecommunications Architectures: The 6 THE WITNESS: I would say that the Internet Convergence of Internet Technology and Cellular 7 7 protocol IP is packet-switched. Telephony," Randy H. Katz. 8 8 BY MR. ALBERTI: (Exhibit 6 marked) 9 Q. Would you agree, again, that packets sent from 9 BY MR. ALBERTI: 10 my computer to your computer over the Internet that have 10 Do you recognize this article? 11 been encoded using TCP/IP do not have to follow the same 11 A. I wonder who that guy is. 12 12 path? Just as a preamble before you go into this, is 13 A. I, I'm a stickler for, for the correct use of 13 there anything I can put aside for a moment? 14 14 the terminology here, and I cannot agree with what you Q. Sure. You can put aside -- I would keep the, 15 just said with respect to TCP/IP. 15 the table with the definitions in it. And you can put 16 Q. So what would be wrong with that statement? 16 aside everything else. 17 17 A. I think what you are describing is the IP First of all, do you recognize the article? 18 protocol can deliver packets out of sequence. 18 A. I do. 19 Q. Does TCP/IP use the IP protocol? 19 Q. Is this an article that you wrote? 2.0 A. It uses the IP protocol as a lower layer upon 20 21 which TCP can be constructed, but is not exclusively 21 Q. Is this an article you wrote in the 1998 time 22 22 necessary to implement it upon. frame? 23 Q. Is IP a packet-switched protocol? 23 A. I'm trying to remember exactly when it 24 A. I would say IP is a packet-routing protocol. 24 appeared. I know that somewhere in this collection of 25 I think that would be a more appropriate term. documents was my CV. So let me go and, I can look it

21 (Pages 78 to 81)

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Page 106

partitioning it in two different places . . . 1

Q. Let me ask it this way. When you reviewed the prior art, did you consider that a header and a payload had to be stored in adjacent memory cells in order for a prior art reference to satisfy the claim language?

A. I don't think I really considered that in my review of the prior art.

Q. So to the extent that that didn't happen, you wouldn't say that it wouldn't read on the claim, true?

MR. SANDERS: Objection to form.

THE WITNESS: Well, you know, again, it's sort

12 of -- "bundles of data, each structured with a header

13 and a payload, organized for transmission over the

14 shared wireless bandwidth." I guess there is a range of

15 ways of organizing.

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16 BY MR. ALBERTI:

Q. What is a packet header?

18 A. A packet header, by -- I think a good analogy

19 of what a packet header is is consider a letter to be

20 written and the sort of information you would include on

the envelope in order to ensure that the contents of the

22 letter were delivered: Destination, who it's intended

23 for, maybe even first class versus air mail versus

24 surface mail. So the key elements being who sent it and

25 where is it going, combined with other information Page 108

Q. As far as where it exists within the packet, 2 it's not necessarily important to be determined whether or not it's a header, true?

4 A. Headers are, are an element of the protocol specification of where to look within a bundle of data to find the header. Once we agree on where it is, it could be at the front, at the back, or in the middle.

Q. And it could be adjacent to the payload or potentially stored somewhere else.

10 A. That is a little harder to agree to because 11 the, the way that networking works, it's, it's all a question of offsets, you know, sort of step offsets from 13 where the thing begins. Bytes 0 through 63 are the 14 header and byte 64 is where the payload begins. I mean, 15 it's not that there's some kind of pointer that says the 16 header is here and the payload is here as, you know, 17 kind of different addresses or something like that. That's not how it's normally done. 18

Q. It's possible to do it that way, though.

A. I guess, you know, hypothetically, anything is possible. It's hard, hard to exclude anything. But in 22 the vast history of protocol definition, that is not how 23 it is certainly commonly done.

Q. When you say "specified by a transmission 25 protocol," what do you mean by that?

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Page 109

2 information. Q. If you turn to page 19 of your report. 3 4

associated with the successful delivery of that piece of

Appears that there's an actual definition of packet header that I'll ask you about. A. Okay. Page 19. Let's make sure I've

got . . . It's divided into two pieces. Page 19. Q. Paragraph 52. You see there's a definition of

packet header? 10 A. I do. And I think that's consistent with what

I just said as an analogy: Identify the data carried 11 12 within the packet, the source, the destination, the 13 sender, the receiver, and other information related to 14 the way it is to be transmitted -- first class, you 15 know, book rate; how a receiver should process the 16 packet on receipt. Think of cash on delivery or some 17 such thing, or signature required, "or information to 18 confirm the packet was received successfully." Whatever 19 that's called, registered mail.

20 Q. Here you talk about a "portion" of the packet. 21 Does it matter whether the portion is at the front of 22 the packet or the back of the packet to be considered a 23 header?

24 A. I don't consider that an important 25 distinction.

A. A transmission protocol, that's in reference 2 to a protocol involved in the transmission of data from

3 sender to receiver, from source to destination. I

4 would, I would -- you know, that involves at a level

within the network routing, as well as application

delivery, various levels represent transmission. But 7 what it's about is a protocol sufficient information to

deliver data from one point in the network to its

9 destination point. 10

Q. Does it matter if the transmission protocol specifies something as a header as opposed to something else in your determination of whether or not it's a packet header?

A. Generally, the headers are examined by elements in the network to provide the necessary transmission function to figure out what to do. And the payload for that layer of the network is not examined, at least traditionally. So the protocols are defined traditionally to process headers and ignore payload.

Q. If you had a protocol, for instance, that decided to call a header a footer and put it at the end of a packet, and it had all the other characteristics of a packet header, would you say that it's no longer a packet header because the protocol specifies it as a footer?

28 (Pages 106 to 109)

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MR. SANDERS: Objection to form. 1

2 THE WITNESS: It's possible to have packet 3 headers that are actually at the end of the packet. I don't know why they don't call them footers. So I think 4 5 the sort of terminological distinction you're making, 6 hard to disagree with.

Nevertheless, the key aspect is a given level of the network, or shall we say given specification of a protocol, knows, because it's been agreed upon in advance and standardized, where to look in the protocol to find the information it needs to act on the delivery 12 of the packet.

13 BY MR. ALBERTI:

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14 Q. Is there a limitation as to how large a packet 15 header can be?

A. It can't be larger than the packet.

17 Q. Is there a limitation on how large a packet 18 can be?

19 A. There are technical limitations on how large packets can be. They cannot be of infinite size or, for 2.0 that matter, a very, very large size.

22 Q. When you say "technical limitations," specifically what do you refer to? 23

24 A. The way in which the protocols are defined, 25 they will specify a limit to how large the -- if we use

the term "transmission unit," the bundle of data, how

it's I believe, something in the range of 1500 bytes,

binary characters, long. It's just a spec that says a

An example would be in the Ethernet world,

big the bundle of data can be.

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packet that's 1500 bytes. So these things are agreed

upon in advance as to what the upper bound is, as a

guideline for effective implementation.

4 Q. Do you ever have a situation where a packet in an upper layer has a maximum size that is larger than a maximum size of a packet in a lower layer?

A. All the time.

Q. What do you do in that situation?

A. You break up the larger item. You think of it as a molecule. You break up the molecule into smaller constituent atoms. And just as an atom can be broken up electrons, neutrons, and protons, the same thing is true 13 at another level; it can be broken up even more. And at the level of the electron, it can be broken up into 14 quarks or charms or whatever they call it. So it's 15 16 all -- at every level, the way in which you can get very 17 large things to be supported by the network is to turn it into a sequence of smaller things at an appropriate 18 19 layer.

20 Q. You would agree in the situation where you have a higher level packet of a large size that has to 22 get broken up by a lower layer into smaller packets, 23 that the smaller packets don't necessarily need to be 24 stored in sequence, true?

Page 113

MR. SANDERS: Objection to form.

1 THE WITNESS: There's a lot of words that were in there, and they didn't map onto my precise

understanding of networking technology. So maybe we 3

4 want to kind of parse that out a little by, piece by

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14

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6 So one clarifying question I have is you said 7 something about higher level packet. Can you be a little bit more precise of what you mean?

9 BY MR. ALBERTI:

10 Q. I believe I asked you a question that at a 11 higher layer, you can have a packet size that can have a 12 certain maximum that is larger than the maximum package 13 size of a lower layer in the stack.

A. Yes. That was an earlier question, yes.

15 Q. So if we have a packet at such a higher layer 16 that has to get broken up by a lower layer, the lower 17 layer isn't required to store the packets in the exact same sequence as it received -- as it broke them up from 19 the higher layer?

20 A. Store. There is buffering that occurs, so 21 there is at least storage of part of the higher level thing. I, I guess I'm not quite understanding the 23 distinction that you're, you're, you are drawing here

24 between higher layer protocol or packet, and lower layer. I understand something is bigger, mapped into

Page 111

packet can't be longer than this. A packet header will be well defined within a protocol. Each one of the fields will be defined. And so, you know, the packet headers are traditionally not of variable length. They're of a fixed length and a well defined pattern to the information that's in them.

But I can't quite remember, are we talking about packet header or packet. But packets cannot be, you know, because of protocol and technical limitations, cannot be of any, any arbitrarily large size. There are limits to how big they can be.

Q. Are those limits based on hardware characteristics of systems that will carry the packets?

A. They represent a specification and constraint on the underlying hardware system.

So, for example, if we, if we limit a packet 22 to be sent over, let's say Ethernet, to something like

23 1500 bytes, that is important information to

24 implementers to know how big buffers can be, how big --25 they can't be 1400 bytes because they might receive a

29 (Pages 110 to 113)

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Page 118

a protocol, shall we say. 1

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Generally, in the sort of networking art, the information necessary for a protocol to operate is associated with packet headers. And so it seems that this "one or more fields within a packet that are specified as being header fields by a communications protocol" does a more precise job of defining what constitutes the header, because it's qualifying it by the communications protocol.

Q. So you would agree that in the new construction -- first of all -- let me strike that.

You agree more with the new construction than 13 the old construction.

14 A. I agree with the new construction. I'm, I'm 15 satisfied that it is more precise. 16

Q. So under the new construction, the one or more fields have to be specified as being header fields by the communication protocol.

19 A. Right.

2.0 Q. If it's specified as being a footer field, it 21 wouldn't qualify.

22 A. As I said, you know, again, the terminology is 23 not so much about headers, you know, header meaning it's at the front. It's about well specified within the 24

packet where are those fields.

Page 120

this, but I just kind of wanted to wrap up this one 2 issue so we can go have lunch, but . . . And let me just reread what you said so I can make sure that we're on the same page here.

A header field is the information processed by a communications protocol that is necessary to -- for it to be able to perform its functionality of achieving communication between sending and receiving entities.

9 A. So the "it" refers to the communication 10 protocol, and the fields are exclusive of the payload.

Q. And just to be sure, I thought you mentioned earlier that you could have a header that's encapsulated within a payload.

MR. SANDERS: Objection, form.

THE WITNESS: What I said before, you know, 16 there's, there's this notion in the networking world of layers upon layers and protocols wrapped in other protocols. So for a given, a protocol at a given layer, 19 its headers are well defined and processed by the communications protocol for that layer.

There can be embedded in the payload subpackets, if you would, with their own headers and payload, which are processed and appropriate for a higher layer protocol. That's -- there are layers of communication protocols. There's not one communication

Page 119

Q. Well, you know --

A. And that's generally called a header, whether it's at the back or at the front or in the middle. It's just you know where precisely to look to find that

5 information.

> Q. So because you like to be precise, I want to get your opinion on, what precisely is a header field?

> A. The header field is the information processed by a communications protocol that is necessary to -- for it to be able to perform its functionality of achieving communication between sending and receiving entities.

Q. Is that a precise definition of a header field?

14 A. It's as precise as I can come up with at 15 15 minutes after 12 before lunch.

16 Q. We'll, we'll -- I promise that we'll break 17 after this. So --

18 A. Okay, okay.

19 Q. -- you know, and I don't want to --

20 A. I'm trying to be --

21 Q. -- I don't want to rush you.

22 A. I am trying to be precise.

23 O. This will be the last --

24 A. I'm sorry. I'm also talking over you, sorry.

25 Q. That's okay. And again, we'll move on after Page 121

protocol. There's IP and on top of it is TCP, or ATM and on top of it TCP. So these are examples of the kind 3

of Russian doll inside Russian doll.

4 So in my effort to be precise, when I say a communications protocol, it's not that there is "the" communications protocol, or only one communications protocol. Maybe to be more precise, for a communications protocol at a given layer of the network, it processes the header fields to achieve its function 10 of communicating between sending point and receiving

11 point. 12 O. The protocol will typically define portions of

the header as different fields of the header.

14 A. Yes.

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Q. Those would be the header fields.

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MR. ALBERTI: Why don't we take our lunch break.

19 MR. SANDERS: Sounds good.

20 THE WITNESS: Thank you.

21 THE VIDEOGRAPHER: Going off the record, the time is 12:20. 22

23 (Lunch recess)

24 THE VIDEOGRAPHER: Back on the record, the 25 time is 1:11.

31 (Pages 118 to 121)

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Netscape Navigator

group or some other forum dedicated to that who participates in the rec.music.gdead news-

.net \dot-net'_-N E-l'\ n. In the Internet's Domain Name System, the top-level domain that identifies addresses of network providers. The designation net appears at the end of the address. See also

DNS (definition D, domain (definition 3). Comnet. \net'dot\ prefix A prefix used to describe people and institutions on the Internet. For example, a very well respected person might be described Net \net\ n. 1. Short for Internet. 2. Short for

pare, com, edu, gov, mil, org.

as a net god.

work etiquette. Principles of courtesy observed in netiquence \net \(\perp \) het \(\perp \) \(\perp \) Short for netsending electronic messages, such as e-mail and Usenet postings. The consequences of violating name placed in the bozo filter of one's intended audience. Disapproved behavior includes gratunetiquette include being flamed and having one's itous personal insults; posting of large amounts of irrelevant material; giving away the plot of a movie, television show, or novel without warning, posting offensive material without encrypting it, and excessive cross-posting of a message to mul-liple groups without regard to whether the group members are likely to find it interesting. See also bozo filter, flame

net address \net a dres, e-dres\tau n. 1. A World Wide Web address (URL). See also URL 2. An e-mul address. 3. The DNS name or IP address of

machine. See also DNS (definition 1), 1P NetBEUI \net'B-E-U-l'\ n. Short for NetBIOS Enhanced User Interface. An enhanced NetBIOS protocol for network operating systems, originated by IBM for the LAN Manager server and now used with many other networks. See also LAN Manager,

netizen \net'i-zan\ n. A person who participates in online communication through the Internet and other networks, especially conference and char services, such as Internet news or Fidonet. Com-

NetPC \net'P-C'\ n. A computer platform specifi-cation created by Microsoft and Intel in 1996 for systems that use Windows NT server based application programs, rather than applications located on the client computer.

tion programming interface (APD) that can be used

NetBIOS \net'bTos, net'B-FO-S'\ n. An applicaby application programs on a local area network running MS-DOS, OS/2, or some version of UNIX. provides application programs with a uniform set

Primarily of interest to programmers, NetBiOS

consisting of IBM and compatible microcom

between nodes on a network and to transmit information back and forth. See also application of commands for requesting the lower-level nerwork services required to conduct sessions

slang term for a person who has attained some net.personality \net'dot-par-sa-nal'a-tê\ degree of celebrity on the Internet.

self-appointed) who try to enforce their under-standing of the "nules" that apply to conduct on the Internet. Their activities may be directed net.police \net dot-pa-les\\ n \text{Persons (usually mail or to newsgroups, or even people who post toward users who violate the rules of netiquette spammers who send unsolicited advertising as e-'politically incorrect" comments to newsgroups or mailing lists. See also netiquette, spam.

\rret'bi os

en-hansd' yoo'zar in tar-fas, net B-LO-S' \ n. See NetBSD \net'B-S-D-\ n. A free version of the BSD UNIX operating system developed as a result of a volunteer effort. NetBSD is highly interoperable, runs on many hardware platforms, and is

NetBELT.

NetBIOS Enhanced User Interface

ning interface.

Netscape Navigator \net skap nav ə-ga tər\ n. The most widely used family of Web browser pro-Netscape Navigator are available for the Windows grams, made by Netscape Corporation. Versions of 3.1, Windows 95, Windows NT, and Macintosh platforms, and for many varieties of UNIX. Netscape Navigator, which is based on NGSA's Mosaic Web browser, was one of the first commer

nethead \text{ net} \text{ hed} \text{ } n. **1.** A person who uses the Internet as if addicted to it. **2.** A Grateful Dead fan

son within the Internet community.

nearly POSIX compliant. See also BSD UNIX, act.god \ner dot-god \ n. A highly respected per-

cially available Web browsers. See also Mosaic,

Vetscape Server Application Programming Interface \net-skap sər-vər a-plə-ka`shən program-eng in tar-fast n. See NSAPI.

Netspeak is characterized by acronyms (such as IMHO or ROFL) and clarifying devices such as emotigs and emoticons. Use of Netspeak should Vetspeak \net spēk\ n. The set of conventions for writing English in e-mail, IRCs, and newsgroups, be governed by netiquette. See also emotag, emoticon, IMHO, IRC, netiquette, ROFL.

Net surfing \net' surfeng\ n. The practice of exploring the Internet without a specific goal in mind. The concept of Net surfing is similar to (and probably derived from) "channel surfing" in reference to watching television.

computer with a reduced number of components Internet, such as e-mail, Web access, and telnet connectivity. These machines, which are under hard disks or installable programs, but will obtain any necessary materials for the user from somenet-top box \net top boks \ n. A type of personal that is built primarily to provide a low-cost access terminal to the various services available on the development, will not have locally addressable where on a network to which the net-top box is

tem. NetWare runs on many different hardware connected. Compare Java terminal, NetPC.

Net TV \net T-V\ n. See Internet television.

NetWare \net \net \net \n \novell's LAN operating platforms and network configurations.

network \net'wark\ n. A group of computers and associated devices that are connected by communications facilities. A network can involve perma nent connections, such as cables, or temporary connections made through telephone or other communication links. A network can be as small ats a local area network consisting of a few computers, printers, and other devices, or it can consist of many small and large computers distributed

expansion card or other device used to connect a network adapter \net'work a-dap tar\ tetwork address translation \net wark computer to a local area network.

tranz-la shan, a-dres / n. see NAT.

other devices, adding and removing individuals and handling mulfunctioning equipment. See also computer network. The cluttes of a network distrator can be broad and might include such tasks as installing new workstations and from the list of authorized users, archiving files, overseeing password protection and other security network administrator \net work adminia-stra tar\ n. The person in charge of operations on a measures, monitoring usage of shared resources system administrator.

including hardware, functional layers, interfaces, and ensure the reliable transfer of information. Netphilosophical and physical standards for the comnetwork architecture \net work ilr ka-tek-char\ # The underlying structure of a computer network, and protocols, used to establish communication work architectures are designed to provide both plexities of establishing communications links and transferring information without conflict. Various tionally accepted seven-layer ISO Open Systems Interconnection (OSI) model and IBM's Systems Network Architecture (SNA), See also ISO/OSI network architectures exist, including the internamodel, SNA.

network computer \net wark kant-pyoo'lar\ n. A computer having the hardware and software network card \net work kard\ n. See network necessary for it to be connected to a network. Acronym: NC (N-C.),

error control, line control, and polling (checking terminals for transmissions), leaving the main computer free for other functions. See also comnetwork control program \net`wark kan-tröl prō-gram\ n. In a communications network that includes a mainframe computer, a program that takes over communications tasks such as routing, usually resides in a commun

one another in more than one way. A network database is similar to a hierarchical database in the network database \net work dirta-bas\ n. 1. A database that runs in a network. 2. A database containing the address of other users in the network. 3. In information management, a type of database in which data records can be related to munications controller.

2

EXHIBIT 14

REDACTED IN ITS ENTIRETY

EXHIBIT 15

THE COMPACT OXFORD ENGLISH DICTIONARY

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The drops distill'd from Clinos convert to blood. 1700 DRYDEN Fables. Cinyras & M. 142 Her solid bones convert

f. Rugby Football. To kick a goal from (a try); also absol. Similarly in N. Amer. Football, to

also absol. Similarly in N. Amer. Football, to complete a goal after scoring (a touchdown). Also in Assoc. Football, etc., to score a goal, basket. from (a penalty kick, free throw, etc.). 1896 field 12 Dec. 957/2 Bell, with a very fine place kick, converted the try. 1900 Ibid. 17 Nov. 772/2 Douglass. gained stry, Franks converting 1919 E. B. Poutton Norsald Poulton 179 Ronald gained two tries, both converted by Turner. 1932 N. Y. Times 4 Dec. It. 1/6 Wolf, replacing Mauney for the purpose of converting the try for a point, kicked wide. 1905 Sport 22-28 Sept. 4/4 He has handed over the responsibility of taking penalty kicks to left-back Jock Fertier, who converted a sport-kick last Saturday. 1961 G. Smith Business of Laving iii. 124 Hammond converted and Shallerton came back as if berserk 1970 Globe & Moil (Torontol 25 Sept. 1) 3 Peter Dittman converted twice, Ted Jankowski kicked a 45-yard single. 1985 Times 2 Dec. 10:1 Oxford's only answer was an 80th-minute penalty converted by Aldridge.

2. intr. To be able to be changed to (now usu. 110) a different form, so as to perform a

into) a different form, so as to perform a

different function: to be convertible

1934 Heal & Son Cotol,: Better Furnit, 10 Child's chair... converts to high chair. 1969 Sears Catal 86 Stroller converts to carriage. 1980 Freemans Catal. Spring & Summer 606 Four senter settee easily converts into a double head.

12. trans. Hence, in many technical uses in Manuf.

a. Steel Manuf. To turn (iron) into steel. Cf.

CONVERTER 3 b.

CONVERTER 3 6.

1837 Whittook Bk. Trades (1842) 225 The steel employed for files undergoes a longer process in the conversion. It is said to be doubly converted. 1875 Unit Dirk. Arts III. 809 Thin bars of iron are much aconverted than thick ones.

b. Ship-building. (a) To reduce (timber) from the rough state into pieces of nearly the required shape and size, (b) To change (a vessel) from one

shape and size, (b) To change (a vesse) from one class to another by alteration of size or rig.

1862 LD. Brougham Brit. Const. xx. 393 Most of the steam-vessels. could be converted easily into men-of-war.

1865 Dockyard Accts. (Blue Bk. 8. 465-1) There is a great excess of offal timber. resulting from a larger quantity of rough timber having been converted.

c. Fire-arms. To change (e.g. a muzzle-loader)

into (a breech-loader).

1874 KNIGHT Diet. Meth. From among the various competing plans for conversing the Enfeld eifle of the English service into a breech-loader, that of Snider was adopted.

d. Watch-making. (See quots.)

1884 F. J. Britter B'atch & Clorkm. 67 A converted watch is one in which an escapement of a different kind has been substituted for the original one. Ibid., In converting a watch from a verge to a lever.

e. Building. To make structural alterations in

or to. Also intr.

or to. Also intr.

1805 Times 7 Nov. 4/4 Two substantial Brick Houses...
converted into a roomy watchouse. 1917 M. Sharp Nutmey
Tree xviii. 233 It was the cloak-room arrangements...
They're going to begin converting next month. 1939 M.
Spring Rick Working-Class Wives viii. 196 It is
immediately practicable to 'convert' a large number of
existing dwellings into. homes for small furnities. 1959 G.
M. Wilson Shadous on Landing i. 7 She had the place
converted after the war.

III. To change by substituting something of
equivalent purport or value.

equivalent purport or value.

†13. To turn into (another language),

†13.

113. To turn into (another language), translate, render. Obs.

1538 Starkey England 1. iv. 136 Hyr ys necessary. to have hyr converted into our tong, 1573 (title) Encidos of Virgill. converted into English Meeter by T. Phaer. 1652 Houses Leviath. III. xxxiii. 244 The seventy Interpreters that converted the Bible into Greek.

14. Arith. To reduce to a different decomination.

that converted the Bible into Greek.

14. Arith. To reduce to a different denomination; to turn into. ? Obs.

1594 BUUNDEVIL Exer. III. II. xiv. (ed. 7), 397 The difference of the Longitudes converted into miles. 1660 WILLSFORD Scales Comm. 27 The common rule of Three... by which means any one thing may be converted into the species of another, in respect of value or quantity.

15. To change by substitution of something of converted to the property value, they to change

equivalent value; spec. in Law, to change (actually or constructively) the quality of property (see CONVERSION 16 b), a. from real to

property (see CONVERSION 16 b), a. from real to personal or vice versā, b, as between partners. 1793 S. C. Cox in W. P. Williams Rep. III. 22 The court was of opinion that upon the construction of the will the real estate was converted into personally for all the purposes of the will. 2827 Jarman Powell's Devices II. 67 Until the trustees should think proper to convert the property. 2849 C. Sprence Equit, Purid. Crt. Chanc. II. 235 Where money is devised to be laid out in land, the same principle applies as where land is directed to be converted into money. 1860 Sir N. Lindley Partnership (1888) 334 It is competent for partners by agreement amongst themselves to convert that which was partnership property into the separate property of an individual partner. 1867 SMILES Huguesoit Eng. x. (1880) 161 Those who possessed goods and movables, made haste to convert them into money.

convert ('konvatt), a. and sb. Also 6 conuart. [app f. convert v: perh. by abbreviation for converted, but possibly partly due to converse sb.*, a. F. convers: cf. sense 2.] A. adj.

1. = CONVERTED 2. Now rare:
1622 BACON Hen. VII. Wks. (Bohn) 187 John Osbeck, a
convert Jew. 1715 Shartesh. Charac. (1737) 111. 78 By
means of a convert emperor. the heather church-lands..
became transfer'd to the Christian clergy. 1812 J. & H.
SMITH Ripected Adds., Archit. Alons (Rtdg.) 128 When
convert Christians read No sacred writings but the Pageo

†2. convert brother, sister: = CONVERT 1b. 2,

CONVERSE Sb. 2 . Obs.
1639 GLAPTHORNE Wit in Const., More mony. Than would for convert-sisters build ten almes houses. 1693 it.
Emillianme's Hist. Monatt. Ord. xvii. 179 The Convert Brothers shall recite, seventy seven times the Lord's Prayer.

B. ch.

B. sb.

1. A person converted to, or brought to embrace and profess, any religious faith or

doctrine

1561 T. Norton Calvin's Inst. 111. 191 [They] appoint certaine dayes to their newe convertes, during the which they must exercise themselves in penance. 1611 BIBLE Inst. 12. 27 Zion shall be redeemed with judgement, and her converts with righteousnesse. o 1680 BUTLER Rem. (1759) I. 265 A Convert's but a Fly, that turns about After his Head's pull doff, to find it out. 1704 NELSON Fest. St. Fast. (1710) 17 An early Convert to Christianity. 1794 PALEY Evid. II. 18. 42 Converts properly so called, that is. adules voluntarily embracing Christianity. 1876 J. H. Newman Hist. Sk. I. 1. ii. 87 In Sogdians and Khorasan they had become converts to the Mahometan faith.

b. transf. A person brought over to any pointion, belief, or party.

b. transf. A person brought over to any opinion, belief, or party.

1641 W. Hakewith Libertie of Subject 3, 1 did forsake my former opinion as erroneous, and do now embrace the contrary. and so am now become a convert. 1656 Boyle.

Occar. Reft. D. xv. (1675) 144 If..our new Convert shall consider things of this Nature. 1771 Junius Lett. liv. 287 A convert to triennial parliaments. 1859 SM(LES Self-Help iv. 87 For some time, he did not make a single convert, and gained nothing but., abuse.

† 2. = CONVERSE 16. 2. Obs.

1577 HOLINSHED Chron. II. 136 One of his owne servants d conspire with a concert of that abbeie.

† 3. That which has undergone conversion;

that into which anything is turned. Obs. rare.

1589 Warner Alb. Erg. v. xxxi (1612) 157 When his sudden eics admir'd the boan-flesht faire Conuart Derived from his Side. [Adam's rib 'converted' into Eve.]

4. Canadian Football. [f, sense 11 of the vb.] A goal completed by kicking the ball between the

goal completed by kicking the ball between the goal posts, or by running the ball over the goal line, after a touchdown.

1950 Toronto Daily Stor 23 Oct. 19/1 Fred Wilmot booted four converts. 1958 [see rafety touch s.v. safety 11]. 1968 Globe if Mail (Toronto) 11 July 32/4 Mann, whose punting average was 43 yards in 13 attempts, also kicked five converts. 1988 Ibid. 10 Oct. 64/2 The sectual kicks — punts, field goals, kickoffs and converts — get the attention because they are easily quantified.

5. Comb. (in sense 1).

1738 Lond, Mag. 190 A Missioner in Ireland, and a very busy Convert-Monger.

converted (kon'va:tid), ppl. a. [f. convert v. + -ED1.]

1. Turned, turned back; cf. conversion 3.

1618 Charman Heriod 11. 434 Fifty days after heaven's
onverted het. Then grows the navigable season it.

2. That has turned or been brought over to a

2. That has turned or been brought over to a religious faith or profession, whether from a different religion or from irreligious life.

1640 Be. Hale Epize t. v. 21 Countenancing and incouraging the converted Governous of the Church. 1677 W. Hushard Narrative 11. 74 One Converted Indian that revealed the Plot. 1762-71 H. Walfock Vettle's Anecd. Paint (1786) III. 1980f all his works, Sir Godfrey was most proud of the converted Chinese at Windsor. 1851 Missionary 1. 207 A brother and a sister. the former a converted the latter a heathen, native. Mod A converted prize-fighter. The prescher was a converted Jew.

3. a. Changed into something else; see CONVERT U. 12. 4b. Reduced; see 14.

3. a. Changed into something else; see CONVERT U. 12. † b. Reduced; see 14. 1394 BLUNDEVIL Exerc. III. III. xiv. (ed. 7) 397 The summe of the two converted longitudes added together is 1247. 1865 Dockyard Acets (Blue Bl. 8. 465-1) The curvature and bevelling required in a large portion of the converted timber. 1875 Use Diet. Arts III. 895 Cemented or converted steel...in produced by the carbonisation of wrought iron. 1884 (see CONVERT # 12d).

C. spec. Of a building (see CONVERSION 12 e, CONVERT # 124).

C. spec. Of a building (see CONVERSION 12 e, CONVERT U. 12 e).

1888 KIPLING Phontom Rickthaw (1889) 12 It was my businest to live in dik-bungalowa. I lived in 'converted' ones-old houses officiating as dik-bungalows. 1924 PMACDONALD Raip viii. 110 She perceived No. 14 to be a 'converted' house. A great black building that might once have housed a merchant prince, but was now the warren of retired grocers, oddities, solicitors, and divorcees. 1959 F. DONALDSON Child of Twentiers: 151 A very attractive small flat. a converted 1.-shaped London drawing-room.

d. Rugby Football. (See CONVERT U. 11 f.) 1907 A. H. BASKEVILLE Mod. Rugby Football is 12 A converted try. equals 5 points. 1927 [see CONVERSION 11 d].

4. Logic. See CONVERT U. 4 b.
1856 tr. Hobba's Elem Philos. 1. iv. 37 Changing. the Propositions, into converted Propositions Logic iv. 71 Each universal proposition has converted contronominals for its affirmative forms. 1851 [see exposita]. 1870 [see CONVERTED].

CONVERTENDI.

convertend ('konve, tend). Logic. [ad. L. convertend-us, -um to be converted, gerundive

pple. of convertere to CONVERT.] The name given by Hamilton to the proposition to be converted, or as it stands before conversion; see CONVERT v.

4.0.

1837-8 Str. W. Hamilton Logic (1860) 1, 256 The original of given proposition is called the Converse or Converted. It would be better to call [ii] the Convertend. This language I shall use. Ibid. I, 257, 1870 Jeyons Elem Logic x. (1880) 82 In order that the converse or converted proposition shall be inferred from the convertend.

converter (kon'vatto(r)). Also erron. -tor. [f. CONVERT v. + -ER¹,]

1. One who converts (another) to any faith,

1. One who converts (another) to any faith, opinion, or party; one who makes converts. 1570-6 Langardo Peramb. Kent (1826) 2 The messengers of Pope Gregorye (that were converters of the people). 1652 Spanke Prim. Devot. (1663) 510 He became a converter of the gentiles. 1726 Cavallies Mem. 1. 3 These unmerciful Converters began with ravaging and destroying all that the Protestants had in their Houses. 1838 Pussy (faile) The Church the Converter of the Heathen.

2, a. One who converts or changes one thing into another; one who turns a thing to another

into another; one who turns a thing to another purpose or to his own use.

1533 Timpale Supper of Lord Wks. III. 26t Let our covetous converters chop and change bread and wine, till we there feel, see, and taste neither bread nor wine 1687 N. Johnston Aisur. Abbey Land: 26 A converter of Ecclesiastical Mony to his own use 1825 New Monthly Mag. XIII 510 Modern converters of held-sports into butcheries.

b. spec. (a) One whose business it is to 'convert' rough timber: see CONVERT &. 12 b; (b) one whose business it is to convert iron into steel; (c) In the cotton-goods trade, one who takes unbleached gray cloth and converts it into the finished product' (Funk's Standard Dict., 1928).

1928).

1811 Naval Chron. XXV. 88 One of the nimber-convertors of the dock-yard. 1875 Une Dict. Arts III. 898 Résumur. first [brought] the process of conversion to any degree of perfection. The first principles laid down by him are now the guide of the converter. 1881 Mechanic \$198 Buyers and converters of all kinds of English timber. 1558 Littener 8. Nov. 708; I is the horizontal structure a weakness with yarn spinners selling to cloth manufacturers and manufacturers selling to converters who deal with separate finishers to complete the cloth for final use?

3. a. An apparatus for converting one thing into another.

into another.

1889 Nature 24 Oct. 631 A vessel, called a converter...
whose use is to permit the water to resolve itself into steam,
b. Steel Manuf. A large vessel or retorr, made
of iron and lined with some refractory material (usually a kind of siliceous stone call gonister), in which molten pig-iron is converted into steel by the Bessemer and other processes, see the Bessemer and other processes, see Bessemer, Also, a retort used for Bessemerizing

the Bessemer and other processes, see Bessemer. Also, a retort used for Bessemerizing copper ores.

1867 Morn. Stor 20 Sept. 7 The converters can thus be worked with liquid iron direct from the blast furnaces, the iron remaining perfectly liquid during the short time of transit. 1883 Hapri's Mag. Aug. 1342 The Bessemer process! decarbonizes melted iron in huge converters by forcing an sir stream throught. 1889 Daily News 4 Jan. 21/, 18, 300 ounces of gold, contained in either convecter bars. cast and refined copper, or bullion. 1906 Weitm. Gas. 22 Aug. 9/1 The works, which consist of three blast furnaces and two converters, are capable of treating 10,000 tons of ore per month. 1958 Everyman's Engyl. 111, 754/2 Converter, iron retort used in the Bessemer process of making steel, and for obtaining metal from master (metal sulphides).

c. Electr. An apparatus for converting high-tension into-low-tension electricity. Also, a device for changing current of one kind into current of another kind; = TRANSFORMER 2 B.

1888 [see transpormer 23]. 1889 Pall Mail G. 25 Jan. 61/1 The mains are underground, and the current generated in of high tension. At each house lighted, the current is changed into low tension by means of converters. 1890 C. W. Vincent in 19th Cent. Jan. 147 In electric lighting, induction coils of converse construction are employed. the primary coil being of fine wire, and the secondary or induction coils of converse construction are employed. The primary coil being of fine wire, and the secondary or induction coils of converse construction are employed. The primary coil being of fine wire, and the secondary or induction coils of converse construction are employed. The primary coil being of fine wire, and the secondary or induction coils of converse construction are employed. The primary coil being of fine wire, and the secondary or induction coils of converter control the pace of converters are already in use in several electric lighting systems. 1906 Goodonius & Twenter Technol. 85 Sci. Dict. 783/1 Ano

machine
e. Computers. (See quot. 1962!)
1950 Tompkins & Wakelin High-Speed Computing
Devices xv. 386 An analog-to-digital converter is a device
which accepts instantaneous values of continuously variable
quantities and expresses them in discrete numerical form.
Ibid. 193 A digital-to-analog converter employed in the Bell
Telephone Laboratories p c m. system makes use of the
exponential decay characteristics of the RC circuit. 1951 M.

EXHIBIT 16

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

INTELLECTUAL VENTURES I LLC and INTELLECTUAL VENTURES II LLC,

Plaintiffs,

v.

C.A. No. 11–cv-00908 (SLR)

MOTOROLA MOBILITY LLC,

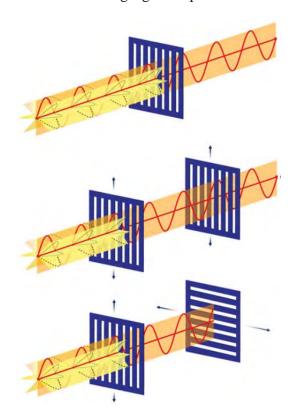
Defendant.

DECLARATION OF TIMOTHY J. DRABIK, Ph.D.

- 1. My name is Timothy J. Drabik and I have submitted expert reports in this action on several occasions. Of relevance here, I submitted a report on the invalidity of U.S. Patent No. 6,412,953 ("the '953 patent") and a report on the invalidity of U.S. Patent No. 7,120,462 ("the '462 patent") on May 17, 2013. I also submitted reports on non-infringement of the '953 patent and the '462 patent on June 7, 2013, and a report addressing secondary considerations of non-obviousness on June 14, 2013. I was subsequently deposed on those reports on June 28, 2013.
- 2. I am over the age of majority and competent to give the statements contained in this Declaration, and if called upon to testify, would do so consistently with what is recorded in this Declaration.
- 3. I have previously explained the concepts of polarization of light and the phenomenon of birefringence in my May 17 report. I stand behind that discussion and incorporate it here. Of specific note, I recount several important discussions relevant to the interpretation of the term

"polarization converter" as it appears in claim 1 of the '953 patent. Specifically, it is my opinion that a polarization converter, as detailed in the '953 patent, must both allow light of acceptable polarization to pass through and, through other mechanisms, transform or convert the light of unacceptable polarization to light of acceptable polarization.

4. First, a polarizer is nothing more than a component that passes light in a way that is sensitive to optical polarization. The following figure depicts this:



5. This figure explains how the component waves of light can be filtered out by polarizers to permit only acceptable light to pass. This does no transformation or conversion of the light. Rather, it merely prevents components of light to pass through. No one of skill in the art would consider this a converter of anything. The same is still true of, for e.g. a reflective polarizer, which sends the unwanted polarization and desired polarization in different directions, because it does not convert the unwanted to the desired polarization.

- 6. Second, I agree with the Oxford English Dictionary's definition of "converter" and specifically find its use concerning electrical current being changed from one kind to another to be directly applicable to the use of the term converter in claim 1.
- 7. As the '953 patent makes clear, the polarization converter changes the light that is not acceptable to the LCD panel ("light valve") into an acceptable polarization. 5:41-48. The rationale for such a transformation is readily apparent to a skilled artisan because if merely a polarizer were used, light of the unacceptable polarization would not contribute to LCD panel illumination. This creates an inefficient system. The '953 patent makes clear that use of a polarization converter improves efficiency. 3:26-32.
- 8. The language of claim 1 "disposed between the illumination uniformizing means and a light valve, to polarize the light form the illumination uniformizing means into a polarized light" explains the location of the polarization converter and reinforces its dual roles.
- 9. The polarization converter must be between the light guide ("uniformizing means") and the LCD panel ("light valve") so that when the acceptable light reaches the back of the LCD panel only the correct polarization of light is present. A reading that would simply allow any polarizing element to be a polarization converter would ignore both the word converter as well as the express teachings of the '953 patent to increase efficiency by transforming the unacceptable polarization into the acceptable polarization.
- 10. I have previously explained in my May 17 report for the '462 patent that IV's proposed construction does not provide any guidance as to how to partition computational functions between primary and less than primary computational functions of the system. I stand behind that discussion and incorporate it here. Moreover, in my opinion there is no support in the

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intrinsic record for the '462 patent for ranking or distinguishing between primary and less than primary computational functions of the system.

11. I so declare under penalty of perjury the forgoing to be true to the best of my knowledge, this 9th day of Aylgust, 2013.

Timothy J. Drabik

EXHIBIT 17

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

INTELLECTUAL VENTURES I LLC and
INTELLECTUAL VENTURES II LLC,

Civil Action No. 1:11-cv-00908-SLR

Plaintiffs,

v.

MOTOROLA MOBILITY LLC,

Defendant.

EXPERT REPORT OF JASON NIEH REGARDING INFRINGEMENT OF U.S. PATENT NOS. 6,557,054 AND 6,658,464

devices under either claim construction.

i) Infringement Under IV's Claim Construction

346. As discussed elsewhere in this report, all of the accused devices include versions of the Google Play application, which presents a list of software applications or "apps" available to be set up on the device and not already set up. To accomplish this, Google Play presents different screens (or "fragments") to the user. The general operation of Google Play is explained to the user in Motorola user guides, such as the following example from the Electrify M user guide, Ex. 10 to the Rudraradhya deposition:

DOWNLOAD APPS

GOOGLE PLAY

Google Play is a new entertainment hub full of music, movies, books, apps, and games. You can instantly access your content from all your Android devices.

Find it: Play Store

- · Find: To search, touch Q in the top right.
- Review: To show details and reviews for an app you found, just touch it.

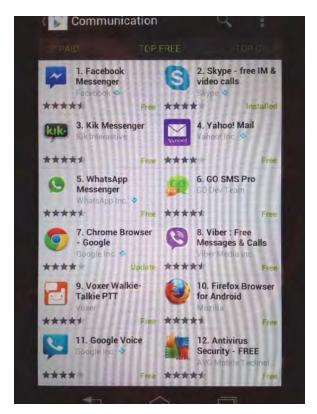
Tip: For the full list of reviews, touch See all below the third review, then touch Most helpful first or Options to customize the list.

- Download: To download an app you found, touch it to open details and then touch Download, or the price.
- Share: To share an app you found, touch it to open details and then touch <.
- Reinstall: To show or reinstall apps you downloaded from the Google Play Store app, touch Menu > My Apps.
- Use a computer: To find and manage apps from any computer, go to http://play.google.com using your Google account and password.

There, you can browse apps on the big screen, manage your apps across multiple devices (like a phone and tablet), and even set new apps to download to your devices.

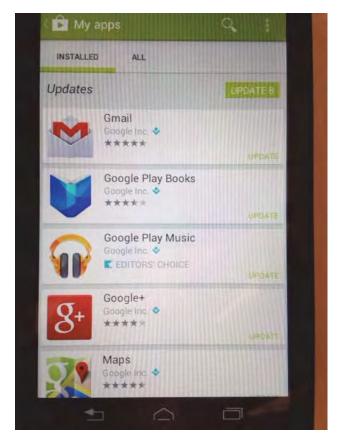
347. Google Play presents its users with a number of listings of applications and/or updates for applications. The listings specifies the availability of software to be

set up for operation on the user station by showing different virtual buttons that communicate the software's availability to be set up. For example, the following screenshot is of a Photon Q 4G LTE phone, which shipped with Google Play version 3.5.19 and auto-updates when launched by user to the latest 4.1.6 version:



348. This screenshot, which is generally representative of how listings of applications are presented in earlier versions of Google Play that shipped on the accused devices, shows software, such as the Facebook Messenger application in the upper left corner, with a virtual button labeled "Free." This specifies the availability of this software to be set up for operation on the user station and further shows that it is not already set up for operation on the user station. This can be seen in contrast with another application, such as the Skype software, which has a virtual button labeled "Installed." This software program is therefore shown as not available for installation as it is already set up for operation on the user's phone. In this manner, IV's construction is satisfied for claims, like asserted claim 1, that do not call out software updates.

349. Certain asserted claims, like exemplary claim 151 reproduced above, call out "software updates." All accused devices present a listing of software updates that specifies their availability to be set up for operation on a user station. The following exemplary screenshot is of a Photon Q 4G LTE phone, which shipped with Google Play version 3.5.19 and auto-updates to the latest 4.1.6 version:

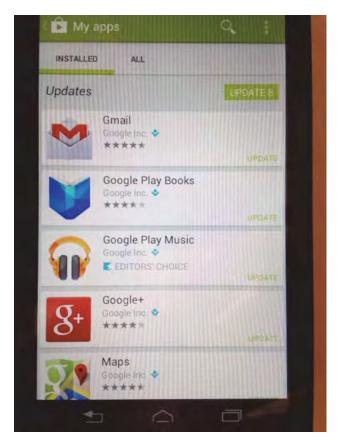


- 350. This screenshot, which is generally representative of how listings of application software updates are presented in earlier versions of Google Play that shipped on the accused devices, shows a listing of software updates with virtual buttons labeled "Update." The label specifies that this is a new version that is available to be set up on the user's phone, but is not yet set up. In this manner, IV's construction is satisfied for claims, like asserted claim 151, that call out software updates.
- 351. The same update-related functionality also satisfies claims, like claim 1, that do not call out software updates. These claims are infringed because software

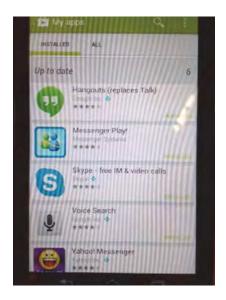
updates are software programs that satisfy the "software" limitation.

ii) Infringement Under Motorola's Proposed Construction

- 352. In my opinion the limitation at issue is also literally present in all of the accused devices under Motorola's proposed construction, which is "causing the user station to display a list of software [updates] available for installation on the user station that does not include any software [updates] already installed on the user station." To the extent that this construction does not require a list of software [updates] that is populated exclusively with applications that are not installed, it is met for the same reasons as under IV's construction. If it requires such an exclusive list, it is still literally met at least by the accused devices, which implement just such exclusive lists showing available updates.
- 353. For devices shipping with Google Play versions above 3.0 (at least the Photon 4G, Electrify, Atrix 2, Admiral, Atrix HD, Electrify 2, Defy XT, Photon Q 4G LTE, Electrify M and XT886), the MyApps page presents the user with several listings of applications installed on the user's device. At least one of the listings exclusively groups the applications for which updates are available and not installed under an Updates header, as shown in the screenshot below:



354. Likewise, applications which are up to date are shown separately under a different header, "Up to date":



355. Notably, the separateness of these two lists is further emphasized by the fact that each list is sorted in alphabetical order. In this manner, Google Play displays exclusive lists showing "software [updates] available for installation on the user station

EXHIBIT 18

REDACTED IN ITS ENTIRETY

EXHIBIT 19

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United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspfo.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
95/002,075	08/16/2012	7,120,462	3059.020REX2	9873	
	7590 06/11/2013 CE + OUIGG LLP		EXAM	INER	
NOVAK DRUCE + QUIGG LLP 1000 Louisiana Street, 53rd Floor			AHMED, SALMAN		
Houston, TX 77002			ART UNIT	PAPER NUMBER	
			3992		
			MAIL DATE	DELIVERY MODE	
			06/11/2013	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Case 1:11-cv-00908-SLR-MPT Document 229-4 Filed 08/16/13 Page 59 of 97 PageID #:

Transmittal of Communication to	0
Third Party Requester	
Inter Partes Reexamination	

C5A5A No.	Patent Under Reexa	mination
95/002,075	7,120,462	
Examiner	Art Unit	
SALMAN AHMED	3992	

	The MAILING DATE of	this communication	annears on the	cover sheet with th	e correspondence address	
-	THE MAILING DATE OF	ting communication	appears on the	COVEL SHEEL WITH HI	e correspondence address	

THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

KILPATRICK TOWNSEND & STOCKTON LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination preeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

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THE RESERVE OF THE PARTY.	cathan No.	Patent Under Reexamination
ACTION CLOSING PROSECUTION (37 CFR 1.949)	95/002,075	7,120,462
	Examiner	Art Unit
	SALMAN AHMED	3992
The MAILING DATE of this communication appo	ears on the cover sheet t	with the correspondence address
Responsive to the communication(s) filed by: Patent Owner on 03 December, 2012 Third Party(ies) on		
Patent owner may once file a submission under 37 Office action. Where a submission is filed, third par 1.951(b) within 30-days (not extendable- 35 U.S.C submission on the requester. Appeal cannot be target of Appeal Notice under 37 CFR 1.953.	ty requester may file res . § 314(b)(2)) from the d	sponsive comments under 37 CFR ate of service of the initial
All correspondence relating to this inter partes re Reexamination Unit at the mail, FAX, or hand-car		
PART I. THE FOLLOWING ATTACHMENT(S) AR	E PART OF THIS ACT	ION:
Notice of References Cited by Examiner, PTC Information Disclosure Citation, PTO/SB/08 □	O-892	
PART II. SUMMARY OF ACTION:		
1a. ☑ Claims 1-3,8-10 and 14-29 are subject to re	examination.	
1b. Claims are not subject to reexaminat		
2. Claims have been canceled.		
3. Claims 1-3 and 8-10 are confirmed. [Uname	ended patent claims]	
4. Claims 14-29 are patentable. [Amended or		
5. Claims are rejected.	ALCOHOLOG AL	
6. Claims are objected to.		
30 (1 LEGY) (5 P. S. 1 (6) (5 C. S.	acceptable are	not acceptable.
8 The drawing correction request filed on		disapproved.
9 Acknowledgment is made of the claim for pr been received. not been received.	iority under 35 U.S.C. 1	
10. Other	A STATE OF THE PARTY OF THE PAR	

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DETAILED ACTION

1. This Office action addresses claims 1-3, 8-10 and 14-29 (of which claims 1-3 and 8-10 are original claims and claims 14-29 are newly added) of United States Patent Number 7,120,462 (Kumar) in response to Patent Owner's (hereinafter PO) response dated 12/3/2012.

Third Party Response

MPEP 2666.05(II) states:

If, upon [a] second submission, the comments [made by the third party requester] are still not proper, the comments will be returned to the third party requester with an explanation of what is not proper, and at that point the comments can no longer be resubmitted... To the extent that 37 CFR 1.947 provides that the third party requester "may once" file written comments, that provision is hereby waived to the extent of providing the third party requester the one additional opportunity to remedy a comments paper containing merits-content that goes beyond what is permitted by the rules; 37 C.F.R. 1.947 is not waived to provide any further opportunity in view of the statutory requirement for special dispatch in reexamination.

Any replacement comments submitted in response to the notification must be strictly limited to (i.e., must not go beyond) the comments in the original (returned) comments submission. No comments that add to those in the returned paper will be considered for entry.<

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Third Party's submission on 5/30/2013 does not appear to be limited to the comments in the original (returned) comments submission dated 1/2/2013. Some examples of which are shown in the following table:

Original (returned) Comments dated	Second submission of Comments dated
1/2/2013	5/30/2013
Section IV.A.i "Newly added claim 14" at	Related Section III.A.i "Newly added claim
page 10 covers claim 14 related to Boyle	14" related to Boyle over Smith Rejection
over Smith Rejection. This section consists	expands over pages 6-9.
of 10 lines of text.	
Section IV.A.ii "Newly added claim 15" at	Related Section III.A.ii "Newly added claim
pages 10-11 covers Boyle over Smith	15" related to Boyle over Smith Rejection
Rejection. This section consists of 11 lines	consists of 21 lines of text in pages 10-11.
of text.	
Section IV.A.iii "Newly added claim 22" at	Related Section III.A.iii "Newly added
pages 11-12 covers Boyle over Smith	claim 22" related to Boyle over Smith
Rejection. This section consists of 11 lines	Rejection consists of 22 lines of text in
of text.	pages 11-12.
Section IV.A.iv "Newly added claim 24" at	Related Section III.A.iv "Newly added
pages 12-14 covers Boyle over Smith	claim 24" related to Boyle over Smith
Rejection. This section consists of 30 lines	Rejection consists of 41 lines of text in
of text.	pages 12-14.

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Section IV.A.v "Newly added claim 25" at	Related Section III.A.v "Newly added claim
page 14.	25" has additional 9 lines of text in page
	14, which are not in original comments.
Section IV.A.vi "Newly added claim 26" at	Related Section III.A.vi "Newly added
pages 14-15.	claim 26" has additional 9 lines of text in
	page 15, which are not in original
	comments.
Section IV.A.vii "Newly added claim 27" at	Related Section III.A.vii "Newly added
pages 15-16.	claim 27" has additional 9 lines of text in
	page 17, which are not in original
	comments.
Section IV.A.viii "Newly added claim 28" at	Related Section III.A.viii "Newly added
page 16.	claim 28" has additional 9 lines of text in
	pages 17-18, which are not in original
	comments.
Section IV.A.ix "Newly added claim 29" at	Related Section III.A.ix "Newly added
pages 16-17.	claim 29" has additional 9 lines of text in
	pages 18-19, which are not in original
	comments.

These are some of the examples of how Third Party's submission does not appear to be limited to the comments in the original (returned) comments submission.

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As such, according to MPEP 2666.05 (II) any replacement comments submitted in response to the notification must be strictly limited to (i.e., must not go beyond) the comments in the original (returned) comments submission. No comments that add to those in the returned paper will be considered for entry.

As such, according to MPEP 2666.05, the comments are being returned to the third party requester with an explanation of what is not proper, and the comments can no longer be resubmitted.

Response to Arguments of Patent Owner

C1. Arguments regarding "a detachable handset unit sized for handheld grasping" as recited by independent claim 1 (pages 25-28):

Patent Owner's argument:

Patent Owner argues that the recited portable processing device of claim 1 includes "a detachable handset unit sized for handheld grasping," The detachable handset unit, as claimed, therefore must be a handheld device. The Microsoft Computer Dictionary defines the term "handheld" in the context of a computer. Specifically, the definition for "handheld computer" is "[a] computer small enough to be held in one hand while being operated with the other hand." (See Nassi Decl., ¶19.) (citing MICROSOFT COMPUTER DICTIONARY 225 (3rd ed. 1997).) The same definition for "handheld" is applicable to a handheld handset unit. (Nassi Decl., ¶19.) Thus, a detachable handset

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unit sized for handheld grasping is a detachable handset unit small enough to be held in one hand while being operated with the other hand. (Nassi Decl., 71i 8.) This construction is consistent with description of handheld handset units in the specification. The specification describes devices that "perform guite well as handheld computing and communication devices." ('462 Patent, 1:45-46.) The exemplary devices include smart cell phone devices such as "the Model PDQ-800 from Qualcomm, Incorporated" and "the Model R380 from Ericsson, Incorporated." ('462 Patent, 1:40-45.) As explained in the '462 Patent, "to allow handheld grasping these units had to be kept small .,, ," ('462 Patent, 1:49-50.) For example, the detachable handset unit is "sized to be carried in a pocket like an average cell phone." ('462 Patent, 5:20-21.)

Examiner's Response:

Examiner submits that the '462 Patent, 1:19-26 states:

TECHNICAL FIELD

The present invention relates in general to portable processor based devices that provide computing, communication or entertainment functionality. More particularly, the present invention pertains to portable processor based 20 devices operable while being held in its user's hand and providing communications, organizer and/or entertainment functions, such as cellular telephones, palm-sized organizers, and MP3 players, and to portable processor based devices providing general computing capabilities, such as 25 laptop or handheld personal computers (PCs). More specifically, the present invention relates to systems that detachably mate a plurality of portable processor based devices to provide their combined functionality in an integrated structure.

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The cited section appears to explain the invention being <u>marrying</u> of portable device that (1) can be hand held, used for communication like cell phones, organization capability like organizers and entertainment like MP3 players <u>with</u> (2) general computing capabilities like laptop computers or handheld personal computers (PCs). Examiner submits that handset unit does not require that *it be held in one hand and operated in the other*. Although, specification of '462 patent states in column 5, lines 14-20 that handset unit is "small enough" to be carried in a pocket like an average cell phone, however, such description is not part of the claim language.

Examiner respectfully disagree with the Patent Owner's assertion that the detachable handset unit, as claimed, therefore must be a handheld device. The claim language states "a detachable handset unit sized for handheld grasping". The word "handheld device" is not part of the claim language. Therefore, the definition for "handheld computer" being "[a] computer small enough to be held in one hand while being operated with the other hand" is not limiting the scope of the claim language "a detachable handset unit sized for handheld grasping". Examiner further submits that anyone of the following handheld unit may be sized for handheld grasping: PDA, TABLET, CELLPHONE, NETBOOK, LAPTOP etc. Therefore, Examiner submits that that the word "handheld" in claim 1 modifies "grasping,"; it does not modify "computer," and describes the type of grasping (i.e. handheld grasping) for which the device is used - holding it in one's hands, Examiner respectfully submits that, '462 specification seems to define the handset unit to be small enough to be carried in a pocket like an average cell phone; however, that is not part of the claim language. In response to applicant's

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argument that the references fail to show certain features of applicant's invention, it is

noted that the features upon which applicant relies (i.e., a detachable handset unit sized for handheld grasping is a detachable handset unit small enough to be held in one hand

while being operated with the other hand) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993).

Therefore, Examiner disagrees with the Patent Owner regarding this issue. It is for the same reasons Boyle does indeed teach the cited limitations.

C2. Arguments regarding "a portable docking display unit ... including a first display" as recited in independent claim 1 (pages 28-29):

Patent Owner's Argument:

Patent Owner argues that nowhere does Boyle disclose that the docking station itself includes an integrated display. Instead, Boyle discloses that a CRT monitor is coupled to and placed on. the top of the docking station (Boyle, 5:38-43.) Contrary to the position taken in the Office Action, providing "increased video display capability" is not the same as having a display. (Nassi Decl., 24.) The docking station of Boyle provides the increased video display capability recited in claim 1 of Boyle through a set of video components, as illustrated in FIG. 21. As explained by Boyle, a "video controller 712 is coupled to bus 702 and controls video data and display for the docking station."

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(Boyle, 13:22-23.) A VRAM "provides storage for video information prior to its display. VRAM 714 is coupled through Mux 715 to video digital/analog converter/color look-up table ...which generates the red, green, and blue analog signals needed 10 drive a video monitor." (Boyle, 13:26-32) Thus, the increased video display capability is used to drive a video monitor that is external to the docking station of Boyle.

Examiner's Response:

Examiner submits that the claim language states:

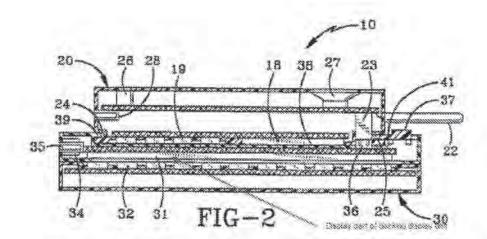
a portable docking display unit dimensioned substantially larger than said detachable handset unit, said portable docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including a central processor and including a video interface, and a data input interface, and wherein said central processor controls the operation of at least one of said second circuits and said first display when said detachable handset unit is docked with said docking display unit:

The claim language states that "portable docking display unit including a first display" (emphasis added), which Boyle does not appear to teach. Although "integrated" is not part of the claim language, however, it is clear from the claim language that display is part of the portable docking display unit. '462 states that for applications requiring larger display and keyboard, the detachable handset unit is docked into the main unit, the docking display unit. Mating electrical connector 36 in docking display unit 30 may therefore connect these signals to auxiliary display 31, auxiliary keyboard 32, wired communication circuit 33, auxiliary pen-input panel 44, speakers 42 and microphone 43, and power-jack 35.

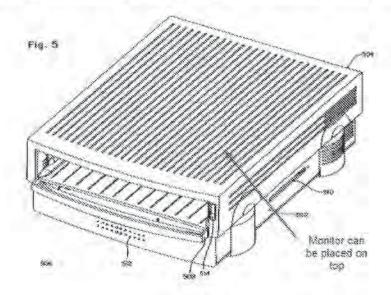
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However, Boyle appears to teach a portable docking display unit having a video connection that can be coupled with an <u>external</u> display. Boyle clearly states in Abstract that the internal mechanical construction of the docking station allows the user to place a large cathode ray tube display monitor directly <u>atop the docking station</u> without hindering the docking or undocking of the portable computer.



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Therefore, Boyle's docking station does not include a display, rather, a display can be connected to the docking station if desired.

Therefore, Examiner agrees with the Patent Owner regarding this issue.

C3. Arguments regarding "a portable docking display unit" as recited in independent claim 1 (pages 29-30):

Patent Owner's Argument:

Patent Owner argues that the combination of the docking station and external CRT display of Boyle is not "portable." As discussed above, the "computer and the docking station are coupled together using a mechanically triggered electromechanical docking/undocking mechanism." (Boyle, 14:11-14.) The electromechanical docking/undocking mechanism of the docking station includes a docking motor, (Boyle, FIGs. 14-15.) The integration of a motor into the docking station significantly increases the weight of the docking station. (Nassi Decl., ¶29.) Boyle further discloses that the docking station is configured so that a large cathode ray tube (CRT) monitor, up to fifty pounds in weight, can be rested thereon without damaging the docking station or impeding its functioning. (Boyle, 2:40-42; 6:38-42.) (emphasis added.) The docking station of Boyle includes "two cross beams [to] help support the weight" of this large CRT monitor when placed on the top of the docking station. (Boyle, 5:40-42.) Thus, the combined weight of the docking station and CRT monitor of Boyle could exceed 50 lbs. A system having the weight and size of the combination of the docking station and CRT Application/Control Number: 95/002,075

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monitor of Boyle would not be easily carried by a user. (Nassi Decl., ¶30.) A person of ordinary skill in the art would therefore not consider the combination of the docking station and CRT of Boyle as being a "portable docking display unit." (Nassi Decl., ¶30.)

Examiner's Response:

Examiner submits that claim 1 states:

a portable docking display unit dimensioned substantially larger than said detachable handset unit, said portable docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including a central processor and including a video interface, and a data input interface, and wherein said central processor controls the operation of at least one of said second circuits and said first display when said detachable handset unit is docked with said docking display unit:

Without getting into the components of the docking station of Boyle, Boyle states in column 1, lines 26-37, column 2 lines 56-59:

The dilemma posed to a consumer who desires the portability of a notebook computer and the full functionality of a desktop computer without the need of purchasing two separate systems has been recognized 30 by the computer industry. One known solution is to offer a fully capable portable notebook computer which can be coupled to a separate stationary unit, the stationary unit frequently having additional data storage such as disk drives and additional display capabilities. These stationary units are commonly known as "docking stations".

Therefore, it appears that Boyle's docking station was meant to be a <u>stationary</u> device; not a non-stationary or portable one. In comparison, '462 patent's handheld unit and docking unit are both meant to portable as described in column 3:

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In general, a portable computing, communication and entertainment device in accordance with the present inven-20 tion includes a detachable handset unit and a portable docking display unit. The detachable handset unit is sized for handheld grasping and includes a processor and a phurality of first circuits, the processor controlling the operation of the first circuits. The portable docking display unit is 25 dimensioned to receive docking of the detachable handset unit and includes a first display and a plurality of second circuits. The processor controls the operation of at least one of the second circuits and the first display when the detachable handset unit is docked with the docking display unit. 30

Therefore, Examiner agrees with the Patent Owner regarding Boyle's docking station not being a portable unit. Specifically, the combination of the docking station and external CRT display of Boyle does not appear to be "portable" as disclosed by Boyle in column 2, under "Summary of Invention" section and further in column 3:

The docking station is configured so that a large CRT display may be rested thereon without damaging the docking station or in any way impeding its functioning.

As the docking station is usually kept in one location, it remains coupled to local area networks, the telephone system, peripherals and an AC power source. As soon

D. Arguments regarding claim 3 in view of Boyle and Smith (page 31):

Patent Owner did not present any new arguments in this section.

E. Arguments regarding claims 8 and 9 in view of Boyle and Toshiba (pages 31-32):

Patent Owner did not present any new arguments in this section.

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F. Arguments regarding claim 10 in view of Boyle and Tao (page 32):

Patent Owner did not present any new arguments in this section.

Claim Rejections

RLP 5 - Not Adopted

 Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyle et al. (US PAT 5323291, hereinafter Boyle).

RLP 5 is not adopted for the reasons cited above.

RLP 6 - Not Adopted

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle in view of Smith.

RLP 6 is not adopted for the same reasons as RLP 5.

RLP 7 - Not Adopted

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over
 Boyle in view of Toshiba.

RLP 7 is not adopted for the same reasons as RLP 5.

RLP 8 - Not Adopted

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Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyle in view of Tao.

RLP 8 is not adopted for the same reasons as RLP 5.

Status of the Claims

- 6. Original claims 1-3 and 8-10 are confirmed.
- 7. Newly added claims 14-29 are patentable.

Service of Papers

8. After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550(t').

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in inter partes 9. reexamination proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 314(c) requires that inter partes reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.937). Patent owner extensions of time in inter partes reexamination proceedings are provided for in 37 CFR 1.956. Extensions of time are not

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available for third party requester comments, because a comment period of 30 days from service of patent owner's response is set by statute 35 U.S.C. 314(b)(3). Time periods may be extended only upon a strong showing of sufficient cause.

Notification of Concurrent Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.985(a), to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving the 7,120,462 patent throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP 2686 and 2686.04.

Conclusion

- 11. This is an ACTION CLOSING PROSECUTION (ACP); see MPEP § 2671.02. (1) Pursuant to 37 CFR 1.951(a), the patent owner may once file written comments limited to the issues raised in the reexamination proceeding and/or present a proposed amendment to the claims which amendment will be subject to the criteria of 37 CFR 1.116 as to whether it shall be entered and considered. Such comments and/or proposed amendments must be filed within a time period of 30 days or one month (whichever is longer) from the mailing date of this action. Where the patent owner files such comments and/or a proposed amendment, the third party requester may once file comments under 37 CFR 1.951(b) responding to the patent owner's submission within 30 days from the date of service of the patent owner's submission on the third party requester.
- (2) If the patent owner does not timely file comments and/or a proposed amendment pursuant to 37 CFR 1.951(a), then the third party requester is precluded from filing comments under 37 CFR 1.951(b).
- (3) Appeal cannot be taken from this action, since it is not a final Office action.

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12. All correspondence relating to this *inter partes* reexamination proceeding should be directed:

By EFS: Registered users may submit via the electronic filing system EFS-Web, at https://efs.uspto.gov/efile/myportal/efs-registered

By Mail to: Mail Stop Inter Partes Reexam

Attn: Central Reexamination Unit Commissioner for Patents United States Patent & Trademark Office P.O. Box 1450 Alexandria, Virginia 22313-1450

By FAX to: (571) 273-9900 Central Reexamination Unit

By hand: Customer Service Window Attn: Central Reexamination Unit Randolph Building, Lobby Level 401 Dulany Street Alexandria, VA 22314

For EFS-Web transmissions, 37 CFR 1.8(a)(1)(i) (C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the Office's electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the data of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Salman Ahmed/
Salman Ahmed
Primary Examiner
Central Reexamination Unit - Art Unit 3992
(571) 272-8307

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Conferees:

/Ovidio Escalante/

/Daniel J Ryman/ Supervisory Patent Examiner, Art Unit 3992

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Reexamination	Application/Control No.	Applicant(s)/Patent Under Reexamination	
710000 0000 0000 0000 0000 0000 0000 00	95002075	7,120,462	
	Certificate Date	Certificate Number	

Requester Correspondence Address:	☐ Patent Owner	
KILPATRICK TOWNSEND & STOCKTON LLE WO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834		
LITIGATION REVIEW Case Name	/SA/ (examiner initials)	05/10/2013 (date) Director Initials
1:11cv908 Intellectual Ventures I Lic et al v. M	lotorola Mobil	E
COPENDI	ING OFFICE PROCEEDINGS	
TYPE OF PROCEEDING		NUMBER

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	***************************************				Equivalent of Form PTO/SB/08b (7-09
Substitute for form 1449/PTO		Comp	lete if Known		
INEG	DMAT	MA	DISCIOSIDE	Control Number	95/002,075
INFORMATION DISCLOSURE STATEMENT BY PATENT OWNER		Filing Date	August 16, 2012		
		First Named Inventor	Rajendra KUMAR		
		Art Unit	3992		
	(Use as mo	my sheet	s as necessary)	Examiner Name	AHMED, Salman
Sheet	1	of	1	Attorney Docket Number	3059.020REX2

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	NPL1	"Apple Macintosh Monitor Specification," accessed at http://www.everymac.com/monitors/apple/classic_monitors/specs/apple_mac_color_disp.html, dated October 31, 2012.	
	NPL2	"Apple PowerBook Duo 210 Technical Specifications," accessed at http://www.everymac.com/systems/apple/powerbook_duo/specs/mac_powerbook_duo2 10.html, dated October 31, 2012.	
	NPL3	"Apple PowerBook Duo 230 Technical Specifications," accessed at http://www.everymac.com/systems/apple/powerbook_duo/specs/mac_powerbook_duo2 30.html, dated October 31, 2012.	
	NPL4	"Apple PowerBook Duo Dock II Technical Specifications," accessed at http://www.everymac.com/systems/apple/powerbook_duo/specs/mac_powerbook_duod ock_ii.html, dated October 31, 2012.	
	NPL5	"Microsoft Press Computer Dictionary," Third Edition, Microsoft Corporation, published 1997; pages 225 and 373.	
	NPL6	"Newton's Telecom Dictionary," 10 th Edition, published 1996; page 556.	
	NPL7	"Phones: Ericsson R380 World," Review & Rating, PCMag.com, published April 24, 2001.	
	NPL8	"PowerBook Duo Dock: User's Guide," Apple Computer, Inc., published 1993.	

1616310_1.DOCX

Examiner	/Salman Ahmed/	Date	06/06/2013
Signature	/Saman Annied/	Considered	00/00/2013

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). Applicant is to place a check mark here if English language Translation is attached.

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Search Notes	Application/Control No. 95002075	Applicant(s)/Patent Under Reexamination 7,120,462
	Examiner SALMAN AHMED	Art Unit

CPC- SEARCH	HED	
		4 4
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

	US CLASSIFICATION SE	ANCHED	
Class	Subclass	Date	Examiner

SEARCH NO	TES	
Search Notes	Date	Examiner
File history	9/13/2012	SA
Prosecution history	9/13/2012	SA
File History	6/6/2013	SA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

EXHIBIT 20

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EXHIBIT 21

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EXHIBIT 22

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EXHIBIT 23

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RECEIVED CENTRAL FAX CENTER

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AUG 2 6 2004

Applicant:

Kumar

Examiner:

Huy D. Nguyen

Serial No.:

09/719,290

Art Unit:

2681

Filed:

07 December 2000

Date:

August 26, 2004

For:

PORTABLE COMPUTING, COMMUNICATION AND ENTERTAINMENT

DEVICE WITH CENTRAL PROCESSOR CARRIED IN A DETACHABLE

HANDSET

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

RESPONSE AF

This letter is responsive to the Office Action mailed 26 May 2004 and is being filed within three months of the mailing date of the current Office action. Please charge any additional fee or fee deficiency to Deposit Account 15-0450.

This response is made under the revisions to 37 CFR 1.121, mandatory from 30 July 2003.

The response has the following parts:

Amendments to the Specification - none made;

Amendments to the Claims - beginning on page 2;

Amendments to the Drawings - none made; and

Remarks - beginning on page 5.

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Ser: No. 09/719,290 Response to Office Action of 5/26/04 Atty Docket 117210-27

AMENDMENTS TO THE CLAIMS

Please amend the claims as they currently stand so that they are in accord with the following listing of the claims:

- (Currently Amended) A portable computing, communication and entertainment device comprising:
- a detachable handset unit sized for handheld grasping and including a processor and a plurality of first circuits, said processor controlling the operation of said first circuits;
- a portable docking display unit dimensioned to dock with said detachable handset unit, and said portable docking display unit including a first display and a plurality of second circuits, said plurality of second circuits not including a central processor, and wherein said processor controls the operation of at least one of said second circuits and said first display when said detachable handset unit is docked with said docking display unit.
- (Original) A device, as set forth in claim 1, wherein said processor generates control signals, and said portable docking display unit includes a platform dimensioned to accept docking of the detachable handset unit and a first electrical connector for receiving said control signals.
- (Previously Presented) A device, as set forth in claim 2, wherein said portable docking display unit further includes a second electrical connector for removably engaging said first electrical connector when said detachable handset unit and said portable docking display unit are docked.
- 4. (Original) A device, as set forth in claim 3, wherein said detachable handset unit further includes a memory, a wireless communication circuit, an audio interface circuit, a first microphone, a first speaker, and a power supply.
- (Original) A device, as set forth in claim 4, wherein said docking display unit further includes a wired communication circuit and a communication jack.
- (Original) A device, as set forth in claim 5, wherein said docking display unit further includes a second speaker and a second microphone.

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- (Original) A device, as set forth in claim 6, wherein said docking display unit includes a
 power jack.
- (Original) A device, as set forth in claim 7, wherein said docking display unit includes a first pen-input panel.
- (Original) A device, as set forth in claim 8, wherein said docking display unit is mounted in a vehicle.
- (Original) A device, as set forth in claim 1, wherein said detachable handset unit includes a second display.
- (Original) A device, as set forth in claim 10, wherein said detachable handset unit includes a second pen-input panel.
- (Original) A device, as set forth in claim 11, wherein said detachable handset unit includes a first keyboard and said docking display unit includes a second keyboard.
- 13. (Original) A device, as set forth in claim 12, wherein said detachable handset unit includes a jack to connect to an external headphone.
- (Original) A device, as set forth in claim 13, wherein said detachable handset unit includes a
 jack to connect to an external headset.
- 15. (Original) A device, as set forth in claim 14, wherein said detachable handset unit includes at least one of an optical transmitter and an optical transceiver.
- (Original) A device, as set forth in claim 15, wherein said detachable handset unit includes a Global Positioning System receiver.
- 17. (New) A communication and processing device comprising,

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a portable handset for handheld grasping and manipulation of at least one input device provided thereon, the input device coupled to a processor associated with the handset, and having a first display associated therewith,

a docking display, to which the handset is selectively docked, wherein the docking display has a second display which is larger than the first display, being controlled by the processor.

- 18. (New) The device of claim 17, wherein the docking display is configured as a clamshell unit with first and second portions, having an auxiliary display in the first portion and an auxiliary keyboard in the second portion.
- 19. (New) The device of claim 18, wherein the auxiliary display and auxiliary keyboard face one another when the clam shell unit is in the closed position.
- 20. (New) The device of claim 17, wherein the handset comprises a central processor and at least one interface selected from the group consisting of a video interface, a keyboard interface, a communication device, a pen-input interface, an audio interface or combinations thereof.
- 21. (New) The device of claim 20, wherein the docking display includes at least at least one interface selected from the group consisting of a video interface, a keyboard interface, a communication device, a pen-input interface, an audio interface or combinations thereof, wherein upon docking of the handset, the central processor of the handset controls the at least one interface of the docking display.
- 22. (New) The device of claim 17, wherein the handset comprises a central processor and at least one interface selected from the group consisting of a video interface, a keyboard interface, a communication device, a pen-input interface, and interface signals from the at least one interface are multiplexed.
- 23. (New) The device of claim 17, wherein the docking display includes a recesses portion in which the handset is docked, wherein the handset when docked, is positioned on the back of one of the portions of the clam shell unit.
- 24. (New) The device of claim 17, wherein the docking display is mounted within a vehicle for selective docking of the handset thereto.

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REMARKS

Claim status

Claims 1-16 were pending in the application at the time of the current Office Action. All stand rejected as being obvious over prior art. Claims 1 is amended herein solely for the purpose of clarifying the claim. Claims 17-24 are added herein to define further aspects of the invention. Claims 1-24 are therefore currently pending in the application.

Section 102 rejections

There are no present rejections under Section 102.

Section 103 rejections

In the current Office action, claims 1-5, 10-14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grewe et al. (U.S. Patent No. 5,625,673), hereafter referred to as "Grewe '673", in view of Jones, Jr. (U.S. Patent No. 5,974,334), hereafter referred to as "Jones '334".

In the current Office action, claims 6-9, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grewe '673 in view of Jones '334 and still further in view of Pardo (U.S. Patent No. 6,266,539) hereafter referred to as "Pardo '539".

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

Independent claim 1 recites a portable computing, communication and entertainment device comprising a detachable handset unit sized for handheld grasping. The detachable handset unit includes a processor and a plurality of first circuits such that the processor controls the operation of the first circuits. The device also comprises a portable docking display unit dimensioned to receive docking of the detachable handset unit. The portable docking display unit includes a first display and a plurality of second circuits. The plurality of second circuits does not include a central processor. When the detachable handset unit is docked to the portable docking display unit, the processor of the detachable handset unit not only controls the first circuits of the detachable handset unit but also controls the operation of at least one of the second circuits and the first display of the portable docking display unit. In the claimed invention, the portable docking display unit can be a "dummy" unit that cannot operate unless the detachable handset unit is docked to the portable docking display

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unit. The purpose of docking the detachable handset unit to the portable docking display unit is to extend the capability of the detachable handset unit to function more like a portable laptop computer, for example.

MPEP 2173.05(i) states, "The current view of the courts is that there is nothing inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph. ... Any negative limitation or exclusionary proviso must have basis in the original disclosure."

The negative limitation in claim 1 "...said plurality of second circuits not including a central processor, ..." has basis in the disclosure in at least Fig. 3 which shows a portable docking display unit 30 and a detachable handset unit 20. The detachable handset unit 20 shows a central processor 11. However, the portable docking display unit 30 does not show a central processor. Also, the "Summary of the Invention" in the specification states, "For applications requiring larger display and keyboard, the detachable handset unit is docked into the main unit, the docking display unit. In this mode the detachable handset unit provides the processing and the communication power to the docking display unit." Furthermore, the "Preferred Embodiment for Carrying Out the Invention" in the specification states, "When mated with a docking display unit, the detachable handset unit becomes the controller for the entire portable computing, communication and entertainment device."

It is respectfully submitted that neither Grewe '673 nor Jones '334, nor the combination of the two teach or suggest the claimed invention. Specifically, Grewe '673 and Jones '334 do not teach or suggest a detachable handset unit, having a processor, to control the operation of not only circuits within the detachable handset unit, but also to control the operation of at least one of a display of the portable docking display unit and circuits of the portable docking display unit when the handset unit is docked to the docking display unit such that the docking display unit does not have a central processor of its own, as does the claimed invention.

Instead, Grewe '673 describes interconnecting a PDA with some other accessory to enhance the PDA. (Abstract) For example, Grewe '673 describes mating a cellular telephone to a PDA simply to provide communication between the cellular telephone and the PDA. (Fig. 1 and Fig. 2) The cellular telephone has its own processing capability and can be operated independently of the PDA. Likewise, the PDA has its own processing capability and can be operated independently of the cellular telephone. (column 1, lines 57-64) Grewe '673 does not teach or suggest, for example,

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using a processor of the cellular telephone to control operation of any circuitry or display of the PDA. In the claimed invention, the processor of the handset unit is used to control the operation of at least one of a display of the portable docking display unit and circuits of the portable docking display unit. The claimed invention does not have a processor in the portable docking display unit as does each of the PDA and cellular telephone of Grewe '673. In the claimed invention, when the handset unit is docked to the portable docking display unit, the processor of the handset unit provides processing capability for the docking display unit. Similarly, none of the other embodiments described in Grewe '673 teach or suggest using a processor of a hand-held device to control parts of another device having a display, when docked.

Jones '334 describes a PDA having a multi-positional handset. The PDA has a base with a recessed handset cradle and a handset with a shape complementary to the configuration of the cradle. (column 3, lines 8-19) The handset docks to the PDA base simply to provide power to the handset (i.e., to charge a battery of the handset). (column 4, lines 11-30) Jones '334 does not teach or suggest using a processor of the handset to control the operation of any part of the PDA or vice versa. Jones '334 simply describes docking the handset to the PDA base in a flush configuration for mobile use, and in a non-flush configuration for office use.

In view of at least the foregoing, it is respectfully submitted that independent claim 1 defines allowable subject matter. Since claims 2-15 depend either directly or indirectly from claim 1, it is respectfully submitted that dependent claims 2-15 define allowable subject matter as well.

Applicant respectfully traverses the Examiner taking Official Notice that GPS is very well known in the art for monitoring the position of an object such that it would have been obvious to one of ordinary skill in the art to include GPS in a handset that is capable of docking to and controlling the operation of a portable docking display unit. Applicant has argued above that the device of claim 1 is not obvious. Therefore, the device of claim 1 with GPS is not obvious. Since claim 16 depends indirectly from claim 1, it is respectfully submitted that dependent claim 16 defines allowable subject matter.

With respect to new claims 17 – 24, claim 17 also defines the invention to comprise A communication and processing device with a portable handset for handheld grasping and manipulation of at least one input device provided thereon. The input device is coupled to a processor associated with the handset, the handset further includes a first display associated therewith. The device also comprises a docking display, to which the handset is selectively docked,. The docking

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display has a second display which is larger than the first display, being controlled by the processor of the handset. The prior art of Grewe '673, Jones '334, either alone or in combination, simply do not teach or make obvious the invention as defined in claim 17. Specifically, Grewe '673 and Jones '334 do not teach or suggest a handset unit, having a processor, which is selectively docked with a docking display, and wherein the handset control the operation of the display when the handset unit is docked to the docking display unit. Further, the prior art does not provide a device wherein a handheld unit, the handset, can be docked with a docking display to effectively convert the handset to a laptop or tablet type of PC, with a larger display and auxiliary keyboard providing simpler and more effective use of the processing power of the handset. The dependent claims 18-24 also define clearly distinguishing characteristics of the present invention, which are neither shown nor made obvious by the prior art. It is believed the new claims 17 - 24 are also in allowable condition, and favorable action is requested.

Accordingly, the applicant respectfully requests reconsideration of the rejections based on the arguments made above. After such reconsideration, it is urged that allowance of all claims will be in order.

Respectfully submitted,

Hahn Loeser, + Parks, LLP

Scott M. Oldham

Registration No. 32,712

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Practitioner's Docker No. 117210.27

PATENT

RECEIVED CENTRAL FAX CENTER

AUG 2 6 2004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Application No.: 09/719,290

Rajendra Kumar

Group No.: 2681

Filed: 12/07/2000

Exeminer: II. Nguyen

For: PUKTABLE COMPUTING, COMMUNICATION AND ENTERTAINMENT DEVICE WITH

CENTRAL PROCESSOR CARRIED IN A DETACHABLE HANDSET

RESPUNSE UNDER 37 C.F.R. § 1.116 EXPEDITED PROCEDURE EXAMINING GROUP

Mail Stop AF Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT OR RESPONSE AFTER FINAL REJECTION-TRANSMITTAL

1. Transmitted herewith is an amendment after final rejection (37 C.F.R. 1.116) for this application.

STATUS

2. Applicant is a small entity. A statement was already filed.

CERTIFICATION UNDER 37 C.F.R. 85 1.8(a)

I hereby certify that, on the date shown below, this correspondence is being.

MAILING

Discrete with the United States Press Service in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandra, VA 22313-1450.

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Scott M. Oldham

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Amendment or Response After Final Rejection-page 1 of 2

PAGE 1/10 * RCVD AT 8/26/2004 5:03:29 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/0 * DNIS:8729306 * CSID:3308647986 * DURATION (mm-ss):03-02

EXTENSION OF TERM

3. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE FOR CLAIMS

4. The fee for claims (37 C.F.R. 1.16(b)-(d)) has been calculated as shown below:

	(Col.1)		(Col. 2)	P	(Col. 3)	SMALL ENTITY		
	Claims Remaining After Amendment	Highest No Previously Paid For			Present Extra	Rate	Addit Fec	
Total	24	Minus	20	12	=4	x \$9 =	\$36	
Indep	2	Minus	3		= 0	x \$43 =	\$0	
First Presentation of Multiple Dependent Claim						+ \$145 =	\$0	
						Total Addit. Fee	\$36	

Total additional fee for claims required \$36.00

FEE PAYMENT

Authorization is hereby made to charge the amount of \$36.00 to Deposit Account No. 15-0450.

Charge any additional fees required by this paper or credit any overpayment to Deposit Account No. 15-0450.

Date

te: 8 26 04

Reg. No.: 32,712 Tel. No.: 330-864-5550 Customer No.: 021324 Signature of Practitioner

Scott M. Oldham

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USA

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